The 100 Greatest Events in the History of the Automotive Industry

Ed Wallace - 570KLIF AM

Our First Century of the Automotive Industry

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Foreword

Yesterday we passed out of the penultimate year of what historians have called "the American Century". It's certainly been a period of phenomenal prosperity and achievement, and one of wonder for those of us lucky enough to have been alive during this brief period in history.

As the year 1900 dawned for our great grandparents, America was a nation primarily made up of farmers. Moreover, their average life span was somewhere in the neighborhood of 48 years — so much for the country life's being good for your health. What industry we had in this country was manual and menial in nature. There wasn't any such thing as a large middle class; there were only the very rich and everybody else.

Then in a very brief period of only a decade, we went from using horses as our form of transportation to cars and then to airplanes. A remarkable series of achievements in the briefest of time periods. For just as the "baby boomers" from the Second World War have taken us into the computer age, the "boomers" from the Civil War gave us the automobile, and with it, a new wealth for the country as a whole — not just for the select few. In addition to mobility for all Americans, you can thank the automobile industry for items as diverse as airlines and refrigerators, consumer credit and drive-in restaurants; modern medicine, the five day work week and the coffee break — they're all direct automobile byproducts — spinoffs, if you will.

Over the past forty years I've lived in other countries from the Philippines to Mexico, and I've been amazed by the abject poverty suffered by the citizens of those places. The reasons for the economic enslavement of those people have stemmed both from their inability to create a consumer-oriented market and from their lack of basic transportation with which to either earn a living or spend what little money they might have. It is those two fundamental differences that have made America what it has been for the last hundred years and given us what we have today.

Sadly, so often we forget our own past and the accomplishments of those few who have made life better for all of us. Certainly it was the men and women who created the automobile industry who raised the standard of living for all Americans. At the same time, they made democracy come alive for all of us, if only because the automobile has given us the ultimate in true freedoms: the freedom of mobility.

This book is based on a survey that was sent out to 500 journalists, car dealers, broadcasters and my radio show's listeners. It defines our consensus of the one hundred greatest events from the automobile industry — events that have changed both industrial and sociological aspects of this country. What we have tried to relate in these pages is how your life is better, and how this country has both benefited and improved, because of people like Henry Ford, William Durant, or Walter Chrysler.

It is amazing to me that today so many people criticize or condemn the automobile

outright. Typically, it's out of personal ignorance — they just don't know what the car has meant to us as a nation. I hope that what we present here today will set the record straight.

I'd also like to take a moment to thank all of the celebrities who gave of their time to record vignettes for our broadcast. Certainly without their voices this show would not have been nearly as exciting to listen to. Also, I would like to thank those at 570 KLIF who helped out with this program. From Dan Bennett, who approved the broadcast, to Connie Herrera, who helped arranged a number of the celebrities for recording. I would also thank Mark Friedman who helped do the engineering on the celebrity voices.

One last piece of business, I should also thank my editor, Angie Richardson, who made it look like I paid attention in 10th grade English, which in fact I didn't.

Now, on with the show.

Ed Wallace

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cover photos:
Harley Earl with 1951Buick LeSabre Sport Coupe, montage by Ed Wallace.
Second Row: Louis Chevrolet, Ford Edsels, John DeLorean
photos courtesy of the General Motors Archives

Story 100
The Introduction of the Ford Model A

Debbie Diaz – KLUV FM

Henry Ford's early days clearly showed his brilliance with the durable Model T and he had also demonstrated brilliance in constantly improving his production methods, inventing the moving assembly line and other techniques that kept costs down.

In fact, Ford really made only one fundamental mistake: He stayed too long with the Model T, and in the process left himself and his firm open to General Motors' dynamic rise in the twenties. Something had to be done.

When Henry Ford and his son Edsel drove the fifteen millionth Model T off the assembly line together on May twenty-sixth, Nineteen twenty-seven, it was meant to be a celebration of the Model T; but a few days later all American Ford plants closed. Model T production had ended, even though Ford's new car wasn't yet ready to go. So sixty thousand men in Detroit alone were sent home. Nationwide, ten thousand Ford dealers suddenly had to make a living selling parts or doing simple mechanical repairs.

However, Ford didn't keep them waiting long: On December second of that same year, the new Model A was ready. Now compared with the Model T, the new Model A was a state-of-the-art automobile in late Nineteen twenty-seven. Although it only had four cylinders, it could outrun most six- and eight-cylinder cars on the road. It had a better transmission, hydraulic shocks, balloon tires and a self-starter that always seemed to work properly. It was also extremely quiet when running, a more than comfortable ride, and a stylish body for the time. The Model A was everything the Model T wasn't. And its base price was only four hundred ninety-five dollars.

America went wild: One hundred thousand people came out to see the new Model A in Detroit alone on December second, Nineteen twenty-seven. Police were called in to control the crowds in Cleveland and other cities. The Ford dealer in New York was forced to rent Madison Square Gardens for an entire week to accommodate everyone who wanted to see the new Ford. Within thirty-six hours of its introduction more than ten million Americans had seen Ford's new creation. Within a week, the figure stood at over twenty-five million.

And orders for the Model A came in at a rate that neither dealers nor the Ford Motor Company could keep up with. Ford dealers were averaging twenty-two thousand

sold orders, with deposits, per day for the first three weeks.

This news wasn't as great as it sounds now. Ford lost three hundred dollars on every Model A sold. Why? Because changing over his factories from the Model T to the Model A required four thousand new machines and upgrades on sixteen thousand others.

And problems on the assembly line made production much slower than anticipated. It took over a year to get back on track. In Nineteen twenty-nine, Ford sold one and a half million Model A's - or thirty-four percent of all new cars sold that year. However, at that point unexpected start up costs had lost Ford a quarter of a billion dollars.

Still, in time the Model A saved Ford. And, to this day, no new car ever introduced has had more people come to see its introduction, or more people buy it in its first month, than the Ford Model A.

Story 99
Products That Flopped- The Edsel

Dale Hansen – Channel 8

When we think of American products that have failed miserably in the marketplace, the item people still mention more often than anything else is the Edsel. It's the famous flop folks still remember, even forty years after Ford foisted that car onto the retail public.

The idea for a near luxury car had been fermenting at Ford since the early fifties. At the time Ford commanded over forty percent of the low-price end of the spectrum, and did well with Lincoln. However, Ford had nothing to offer those who were thinking about Chryslers or Buicks.

If the Edsel had a father, it would have to have been Jack Reith. Reith had just returned from Europe, a hero for selling off Ford of France to Simca and getting his company out of a horrible financial mess. Reith was tagged as just the kind of "can-do" guy to get what was then called the E car off the ground.

On April fifteenth, nineteen fifty-five, Reith made his presentation to the Ford board of directors and laid out his plans for the E car. It would cover the market between Mercury and Lincoln. The board approved the plan unanimously. Then, however, Reith himself distanced his career from the E car and instead turned it over to Richard

Krafve. David Wallace, a college professor, was put in charge of the market research for the vehicle. He went to work on a name.

Wallace wrote to poets asking for their suggestions. What he got were names like Resilient Bullet, Mongoose Civique, the Varsity Stroke, and the Utopian Turtletop. They settled on Edsel, Henry Ford the Second's father's name. Henry fired off a scathing memo out to his executives, stating flatly that there was no way the new division at Ford would be named Edsel. Ernie Breech, Ford's president, overrode Henry and announced it to the press anyhow.

Members of the media got their first look at the Edsel in August of Nineteen fifty-seven. They hated it. So Ford put together a television spectacular - with Bing Crosby, Frank Sinatra and Rosemary Clooney, no less - to show the car off to the public. But bad luck struck: When they went to live commercials, that Edsel refused to start.

On August twenty-seventh, Nineteen fifty-seven, the Edsel was available for sale. Surprisingly, it sold well for the first three months. After that, however, its sales slowly bled to death - mostly because it was the ugliest car Americans had ever been asked to buy!

David Wallace, the head of research, was pulled into Henry Ford's office. Ford demanded to know why Wallace's Edsel analysis had missed so badly. Wallace's response is automotive legend: "Why," he said? Because of this. (Insert Audio: As a result of intensive work by research institutes and designing bureaus the first artificial earth satellite in the world has now been created. This first satellite was today successfully launched in the USSR.)

That's right Wallace blamed the failure of the Edsel on the fact that the Russians had launched Sputnik at the same time Ford launched the Edsel: The world was watching the skies instead of the showrooms.

Wallace then went back to being a college professor. And, as the sixties started, the Edsel also went quietly away.

Story 98
The Duryea Brothers Invent The American Automobile Industry
Jeff Ward – Announcer-Wheels

The year was Eighteen ninety-five. Louis Chevrolet was just getting into bicycle racing in France, Walter Chrysler was an apprentice mechanic working for a railroad, David

Dunbar Buick was still a plumber, Henry Ford worked for the Detroit Edison company, and the Dodge Brothers were mere machinists. Nevertheless, it was in Eighteen ninety-five that two brothers named Frank and Charles Duryea started the American automobile industry.

Had the two brothers gotten along better they might have actually had a chance at creating an automotive dynasty. Charles Duryea, the elder brother, worked in the bicycle industry.

Now early in Eighteen ninety-two, Charles talked his brother Frank into leaving his Washburn, Illinois, farm to join him in his bicycle business. However, the second Frank walked into his brother's place of business, Charles informed him that the future of the world was the automobile. Charles assigned the task of creating a motorized wagon to Frank, and then he took off for Ohio to work on a new bicycle design.

From late Eighteen ninety-two to December of Eighteen ninety-four Frank Duryea worked on creating a sellable car. He had troubles with both the engineering and his personal finances - he had no money coming in. But by early Eighteen ninety-five, Frank Duryea had gotten his automobile running; he entered it in a race put on by the "Chicago Times Herald." The Duryea won the event.

Investors appeared almost magically. On September twenty-first, Eighteen ninety-five, the Duryea Motor Wagon Company of Springfield, Massachusetts, became a reality. By May of Eighteen ninety-six, Frank Duryea had built 3 cars. Another ten had been built at the Springfield Industrial School, although those had to be completely redone at the factory. Those thirteen cars, however, marked the start of the automobile industry here in America.

In less than two years the two Duryea brothers sold out, victims of too little capital and too many fights. Frank Duryea went on to start the Stevens Duryea car company, a maker of luxury vehicles. That company closed in Nineteen fifteen. Frank had semi-retired in Nineteen oh-nine after having a nervous breakdown, but he still made a fortune off that company and retired wealthy. Frank Duryea passed away in nineteen sixty-seven, at ninety-seven years of age.

Charles's story didn't have a happy ending. He spent the next twenty years chasing pie-in-the-sky deals and telling everyone who would listen that he and not his brother was responsible for their first car. He passed away in Nineteen thirty-eight.

Nonetheless, that's how two battling brothers started the car industry here in the U.S.

Story 97
Henry Ford Creates Modern Medicine

Kevin McCarthy – 570 KLIF

Henry Ford not only put America on wheels, but he also was responsible for modern medicine. That's all the more remarkable because Henry Ford didn't believe in doctors - he subscribed to Dr. Kellogg's view that diet alone was the key to a healthy life. More than likely it was Ford's deep mistrust of doctors and his sense of charity that changed medicine.

In Nineteen ten Detroit's social elite decided to build a new hospital for the city. Money was donated, balls and charitable events were held, and contractors were hired for the construction - but what got built was an embarrassing fiasco for the rich of Detroit. Because after four years all the money was gone and little work had been done. The upper class of Detroit lived in fear of a legal investigation, one that might tarnish their reputations. The man they turned to was Henry Ford.

Ford had already contributed to the charity and reluctantly agreed to take over the project - but only if he was allowed total control of it. Fearing an investigation, everyone agreed Ford could have it. The first thing that Henry Ford did was give everyone who had contributed to the charity their money back: Millions of dollars. Then Ford set about giving Detroit its world-class hospital.

Ford threw his own ideas into the construction. Everyone was to have a private room. No more crowded wards where diseases could easily be transmitted. Henry also believed that sunlight helped people recover faster; so every room would have a window. Henry Ford outlawed smoking in his hospital. His own doctors complained about that one.

The Henry Ford Hospital was completed just as we entered the First World War, and the government commandeered it. They returned it to Ford after the war, and he opened to the public in November of Nineteen nineteen. For the first time in America everyone had access to the best possible medical treatment, regardless of economic status. Doctors were put on salary to keep the cost of medical care down. Further, Ford had the original idea that in order to become the most proficient at certain disorders, doctors should also become specialists. Ford saw this concept as a logical extension of his moving assembly line.

Ford hired dieticians to create meals that encouraged healing. Detroit's was the first

hospital in America to admit psychiatric patients - progressive ideas, for a country boy who wasn't an educated man. Then Henry Ford gave us one last contribution to medicine - this one because he couldn't sit still.

Back in those days if you had an operation it was common to keep you in your hospital bed for weeks to make sure your recovery was complete. Well in Nineteen twenty-nine Ford himself had to have a hernia operation. Only the next morning Ford refused to use his bedpan and went by himself to the bathroom. His nurses and doctors were furious.

A couple of days later Ford, refusing to stay at the hospital any longer, jumped out of bed and went home. A couple of weeks after that Ford went back for a checkup, solely because his wife had demanded it. To the doctors' surprise, Henry Ford had recovered faster and more completely than any other hernia patient the hospital had treated. Keep in mind that Ford was in his late sixties at the time.

So, the hospital tried getting other patients out of bed quicker after operations and sending them home earlier. Sure enough, that was exactly the right thing to do. The doctors at Ford's hospital published their studies. It's clear today what a tremendous impact Henry Ford's hospital had on every other hospital and doctor - and on the practice of modern medicine - in America.

Story 96
High Pressure Car Sales -Hull Dobbs System

Gordon Keith- the Ticket

Where did car salesmen today get their reputation? Certainly there was a time in America where those who sold us our automobiles and trucks didn't have the negative impact on the American psyche that they do today.

No, the negative connotation that the public at large has for the automobile industry came about in the mid-nineteen fifties. During a time when Detroit was building more cars than the public or dealers could accept. Which led one dealer to come up with a so-called system for selling cars. One guaranteed to turn the maximum amount of prospects into new car owners.

It was in Memphis, Tennessee, where there was a Ford dealership called —Hull Dobbs. Like every other Ford dealership in America during the fifties, Hull Dobbs was trying to find ways to sell all the cars that Ford forced them to take. So they came up with a system for selling the maximum number of cars to customers who came into their showroom.

Hull Dobbs invented the desk system for penciling deals - or maybe we should say they perfected it into an art form. They threw customers' key rings on the roof and wouldn't give them back until they bought. They put intercoms in their salesmen's offices so they could hear what the customers were saying when the salesperson was gone. They invented the "low-ball" for those customers who did get away, knowing they could never buy the car elsewhere for the price they'd quoted and so they would return to be worked again.

Hull Dobbs also invented the turn-over. That is, one salesperson showed you the car, while a professional closer handled the negotiation. It was car sales the tough way, and it worked, big time.

Hull Dobbs became so successful using this hard line that they expanded nationwide. In a short period they added almost seventy dealerships from coast to coast, putting that same hard, hard closing system in place. Mr. Dobbs spent so much time flying to the different stores and complaining about not getting decent foods in airports that he created the Dobbs House restaurants, just so he'd have a place to eat. Today Dobbs International is one of the world's largest caterers for airlines.

Managers who had worked for Hull Dobbs became in demand for other dealers trying to duplicate their success. Hine Pontiac in Dallas in Nineteen sixty went on the Hull Dobbs system. However, the originators finally gave up. It wasn't that they weren't getting rich beyond belief from their seventy high-pressure stores. They were just tired of running that large an organization. So they sold most everything off but the original store in Memphis. AutoNation bought it in Nineteen ninety-eight, not knowing they'd bought the store where high-pressure car sales started - the store that single-handedly ruined the reputation of all car salesmen for the next forty-five years.

Story 95
Chrysler Creates the Modern Rebate – 1975
Richard Schindler – Goodson Acura

Rebates on automobiles are nothing new. The earliest recorded offer of a rebate comes from Nineteen fourteen: Henry Ford offered every Model T buyer a fifty-dollar rebate check should he sell three hundred thousand cars for that model year. Ford ended up mailing checks totaling more than fifteen million dollars to those who had been wise enough to buy his Tin Lizzie that year.

Even at the height of the first energy crisis in early Nineteen seventy-four, General Motors mailed rebate coupons to oil company executives good for up to twelve percent of the list price on any GM cars they bought. Perhaps wisely, GM felt that oil company employees would not be too panicked about the lack of oil and would respond to their offer. They did - in droves. Dealers in Houston were swamped as oil company people marched into their stores with their coupons in hand. The public at large, of course, had no idea that GM was making this offer to this very select group.

However, rebates as we know them today started in January of Nineteen seventy-five. It was during one of the worst recessions in the automotive industry's history, which was caused largely by the huge price increases taken that year by the automobile companies.

Only the year before, an Oldsmobile Cutlass Supreme with bucket seats, alloy wheels, a V-8 and an automatic transmission listed for five thousand, one hundred eighty-three dollars. Then General Motors announced a price increase of three percent for the following year - a fairly high increase, but those were the years of runaway inflation. The real problem was that GM gutted that Olds Cutlass. The three-percent increase was on the base price; now, the bucket seats, automatic, alloys and V-8 were optional. The Cutlass that on one day had cost under fifty-two hundred dollars the very next day would run you six thousand three hundred: The actual price hike worked out to twenty-one percent.

As a nation, we turned our collective back on new cars. The term "sticker shock" came into our vernacular. And car sales, which were down in Nineteen seventy-three due to the energy crisis, dropped another twenty-three percent that year. And no company was hurt worse than Chrysler. By Christmas the company's sales were so bad that dealers already had a four-and-a-half-month supply of unsold cars on dealers' lots - cars that had been introduced only three months earlier.

Worse, Chrysler had eighty thousand more cars built that no dealer in the country would take. So the company gambled: On Super Bowl Sunday during halftime, Joe Garagiola plugged the Chrysler Car Clearance Carnival. Rebates were offered of up to four hundred dollars on selected Chrysler models, and if you traded in certain Chrysler cars, you received another hundred.

The plan worked: Chrysler sales jumped an astounding eighty-nine point three percent over the next ten days. GM, Ford and AMC, stunned, offered their own rebates immediately. And ever since that day, many members of the car-buying public wait for the rebate offer they know will come on the car or truck they really want to buy.

As far back as Nineteen seventy-five, a Ford executive said about Chrysler's rebate plan, "It's like dope. Once you've hooked people on rebates you'll never get them off of them." Now, twenty-five years later, we see how right he was. Thanks to Chrysler's near-bankruptcy, everyone still has rebates today. Or if not today, maybe tomorrow.

Story 94
The Dodge Brothers Start Their Own Car Company

Mike Biggers – Meador Chrysler

Horace and John Dodge were close. Maybe too close. However, without them, not only wouldn't we have Dodge cars and trucks today, but Oldsmobile, Ford and most of Detroit might never had happened.

The Dodge Brothers had both been born in the Eighteen sixties in Niles, Michigan; a few family moves when the boys entered adulthood brought the family to Detroit. In Eighteen ninety-seven Horace Dodge developed a better ball bearing system for bicycles and the two brothers went into business in Windsor, Ontario, as bicycle manufacturers.

Three years later they sold that business to a Canadian company and opened a machine shop in Detroit with the proceeds — seventy-five hundred dollars. Within a year the Dodge Brothers' Machine Shop was making three thousand transmissions a year for Ransom Olds.

A couple of years later Henry Ford, having heard about the Dodge Brothers' excellent quality and honesty in their dealings, went to them to have them build the chassis for his Ford automobiles. In fact, the first Fords were built more by the Dodges than by Henry. Ford liked what they delivered for two hundred fifty dollars: the complete chassis, engine and all running gear. All Ford added to the car was the bodywork.

The only problem was that Henry couldn't pay the Dodge Brothers for their work. Instead they took ten percent of the stock in the Ford Motor Company. By Nineteen thirteen the Dodge brothers' shop had gotten so large that they had moved to much larger facilities in Hamtramck, the site of the main Dodge factory today. But Horace and John knew that Ford was planning to make his company totally self-contained. That would leave the two brothers without their primary customer and a lot of expense overhead. So they decided to enter the car business themselves and set about designing their own automobile. In essence, Dodge cars came about because the brothers didn't really trust Henry Ford.

In Nineteen fourteen the first Dodge sedan came to the market. It was America's first mass-produced all-steel body. It also had a twelve-volt electrical system and a thirty-five horsepower four-cylinder engine. Most believed it was the best built American car at the time. Moreover, Dodge sold forty-five thousand units in the first twelve

months, a record for a new car introduction.

The Dodges later sued Ford successfully for non-payment of dividends in the Ford Motor Company. But they didn't have much time left to enjoy their money or their automotive creations. Also, remember we said the Dodge Brothers were close? Both redheads with fiery tempers, they were each other's closest friends. They were also both heavy drinkers. Long before rock and roll the Dodge Brothers would go out drinking at night and completely trash whatever bar they were in. The next day they would quietly go back and apologize and pay for whatever damage they'd done.

Horace and John Dodge even ate lunch together every day of their lives. In Nineteen nineteen Horace Dodge became a victim of the Spanish influenza plague. He took to his hotel room, barely able to move. John, his loyal brother, spent every day in that hotel room taking care of Horace, and from his brother he, too, caught the Spanish flu. John Dodge died on January fourteenth, Nineteen twenty. Horace held on longer, but the combination of the flu and the years of hard drinking caused liver hemorrhaging, and he passed away less than a year after John.

Frederick Haynes ran their company for five years before selling it to a New York banking group, which in turn sold it to Walter Chrysler in Nineteen twenty-eight. Today the name Dodge lives on, but if it weren't for the two brothers, Ford, Oldsmobile, Cadillac and many other nameplates might not have existed either.

Story 93
John DeLorean's Innovations

Norm Alden – Actor
"Back to the Future"

He won a music scholarship to Detroit's Lawrence Institute, which he attended while working on a Chrysler assembly line and moonlighting as a dance band director at night. Four hours' sleep a night, then off to school, Chrysler, orchestrate the band and back to sleep.

And somehow, this man a decade later would change the automobile industry so completely that the things he created forty years ago still reverberate through the collective national psyche.

Of course, we're talking about John DeLorean.

In Nineteen fifty-two DeLorean took a job with Packard Motor Company as an engineer, and it was immediately apparent that in the automobile DeLorean had found his life's calling.

More important, he was being observed closely by Bunkie Knudsen, who had been ordered by General Motors either to save the Pontiac Motor Division or retire it. Knudsen believed that DeLorean was the man to help him save the place. So in Nineteen fifty-six DeLorean jumped to General Motors.

DeLorean had two great abilities. First, he was one of the best systems analysts the industry ever had. His second talent lay in his understanding the growing youth market. That fact led to DeLorean's first great automotive design: The Wide Track look of Nineteen fifty-nine.

Pontiac's Nineteen fifty-nine bodies had originally been designed to ride on their old chassis, which made the wheels look like they'd been set a foot inside the fender wells. DeLorean was the one who figured out how to stretch the width of those frames so the wheels lined up with the bodies. His first creation at Pontiac is still their advertising slogan today; wider is still better.

In Nineteen sixty-two DeLorean gave us the first Grand Prix. He also created the Tempest, and then put a corporately illegal large-block V-eight into that car, creating the GTO, — and with it, the muscle-car era of the sixties.

Having put Pontiac near the top, GM then gave DeLorean Chevy to run in nineteen sixty eight. You see, GM's most profitable division had fallen on hard times.

DeLorean went to work. Cutting management, talking to everyone from GM dealers to the guys on the assembly line. He pushed projects like the original Monte Carlo, and got them to the market quicker. He also thought Chevy quality stank and forced quality improvements. By Nineteen seventy-two, Chevrolet was back - deep in the black.

Now with that division rescued, the anti-DeLorean people at GM sought to destroy him. They were successful enough that he finally called it quits in April of Nineteen seventy-three. And the question remains: If it had made John DeLorean president instead of running him off, where would GM be today?

Consider this: What car did DeLorean bring to market that wasn't a solid hit with the public - and right in line with the times? Not one. GM crucified its savior - and this one never rose from the dead.

Story 92
Ford's Dominance of the Industry 1914-1925

Terry Box - Dallas Morning News

Today if you had to name the most dominant car company in the world, it would be tough to give the answer. However, from Nineteen fourteen to Nineteen twenty-five, there was no doubt, the world's top car company was Ford.

Henry Ford never set out to control the world with his automobiles. Ford was only trying to build a car to make life better for the American farmers. His goal was never more complicated than that.

When the Model T was introduced in Nineteen oh-eight, the base model cost seven hundred ninety-five dollars. Ford wanted to find a way to bring it down to the average annual income of an American — which was only three hundred thirty dollars a year.

That was his inspiration for working on the moving assembly line. Organizing production and labor so that the increased volumes would keep bringing prices down, thereby making the vehicle more affordable.

Ford himself said that for every dollar he shaved off the cost of the Model T, another ten thousand people could afford one. The plan worked - but it worked too well. Sure, he set out to help the farmers, but once they bought cars, they moved to the city.

In addition, because Ford's assemblymen could now easily duplicate the moving assembly line anywhere in the world, they did. Ford built factories in England, France and Germany. The Japanese earthquake of Nineteen twenty-three forced that government to buy Ford's trucks for rebuilding. Then they demanded a Ford factory for Japan.

Stalin tricked Ford into building in Russia. Ford discovered a factory there was stealing his designs for his tractor. Ford was told, either come build the vehicles yourself for a profit or we'll build them for free. Ford built a factory and it still operates in Gorky today, though it's long since been operated by Soviet car companies.

Ford owned the world. He'd set out to free the farmers and instead put the planet on wheels. So what happened to Ford's dominance? The answer is, Ford stayed too

static. He refused to alter the Model T.

By the mid-twenties everyone knew how the moving assembly line worked, and as consumers became more affluent, they no longer wanted cheap Tin Lizzies, but Ford didn't realize his error until it was too late. While Ford was still living in Nineteen oh-eight mentally, General Motors was correctly guessing what people wanted to buy ——in Nineteen twenty eight.

Still, if Ford hadn't dominated the world for the period Nineteen fourteen to Nineteen twenty-five, everyone else wouldn't have tried so hard to unseat him.

Story 91

Patton Invents Motorized Warfare

Col. David Hackworth - Syndicated Columnist

If you ask the average American to describe General George Patton, most will describe George C. Scott because of his brilliant portrayal of Patton in the movie of the same name. Patton's early military career started a bit differently than his heroics in either the First or Second World War.

Patton was born into a wealthy California family in the late Eighteen hundreds. As a boy he was unusually adorable, enough so that his mother and aunt often dressed him in girl's clothes. He was also quite sickly. However, from a very early age George Patton knew what he wanted to be, and that was a military officer. After attending West Point in Nineteen sixteen, Patton was assigned to General Black Jack Pershing's outfit stationed in El Paso, Texas.

Pershing was then about to lead an American force into Mexico; he assignment was to capture Pancho Villa and his followers for their raids across the border into the United States. Patton was a young first lieutenant, always begging Pershing for some type of front-line duty. Pershing always refused him. Not because he didn't think Patton wasn't capable, but because Pershing had fallen in love with Patton's sister in El Paso - and worried that if anything happened to her brother it would break up their romance. So, Patton instead was given grunt details not far removed from KP duty.

Then Patton finally got his chance. On May fourteenth, Nineteen sixteen, Pershing ordered the lieutenant to go find some maize for the battalion's horses. Taking off across the desert with a small group of soldiers in three Dodge sedans, Patton stumbled across a hacienda near San Miguelito.

From the hill where they were parked, he could see what looked to be a group of Mexican bandits. Realizing that he didn't have time to go back and get the Cavalry, he ordered his soldiers back into the Dodge sedans and tore off across the sand.

The element of surprise was with him. The bandits were captured and their leader, General Julio Cardenas - Villa's trusted subordinate - killed. What Patton did that day was be the first in history to do battle in a motorized vehicle. Of course, within a year or so the entire world would realize that war is more efficient and ruthless when waged with motorized vehicles. Moreover, what Patton learned of the element of surprise and quick mobility in Mexico that day in Nineteen sixteen, in his Dodge sedans, he put to better use with his tank Corps (CORE) in the Second World War.

On a side note: Pershing and Patton's sister soon broke up anyway.

Story 90
Detroit's Near Collapse
1979

Troy Dungan – Channel Eight

Once upon a time, Detroit nearly ceased to exist. This isn't a fairy tale; it really happened — and not that long ago.

It started when hostages were taken at the American Embassy in Tehran —once again, foreign oil was withheld from the U.S. Complicating matters was our runaway inflation rate; within just a couple of years it would hit twenty-one percent. Detroit wasn't prepared for either crisis, much less both. To make matters worse, Chrysler was already on its last legs; either problem could finish Chrysler permanently. General Motors had already started downsizing its cars in Nineteen seventy-seven, in response to the first energy crisis of Nineteen seventy-three. However, the public had already moved back into larger cars, so Ford didn't believe downsizing for better gas mileage was urgent. All three companies were in for a rude awakening.

Within the first three months of the second energy crisis Chrysler turned in a two hundred and seven million-dollar loss. In Nineteen eighty, General Motors lost seven hundred and sixty-three million dollars. Between eighty and eighty-two, the Ford Motor Company lost over three billion dollars. In fact, Ford would have failed but for the profits it was making at the time in Europe. Why all the losses? Americans all but quit buying cars. It just didn't make sense to turn in one gas-guzzling car for another. Especially when the interest rate on the new car was likely to be eight or ten percentage points higher.

As the automakers let their workers go, unemployment in Michigan skyrocketed. The state's tax rolls fell so quickly that the Governor of Michigan seriously considered declaring the state bankrupt. Only an emergency loan of six hundred million dollars from Japanese banks saved them. Eleven hundred people fled Michigan each week — there was no hope of any new employment there. Conversely, Houston's population grew by almost the exact same amount.

Now, let's deal with the myth about this event that persists to this day: Did Americans dump their domestic cars for Japanese cars by the millions during this period? No, they did not. What really happened during this automotive depression was that people just plain quit buying cars — period. Before the event, in Nineteen seventy-eight, Detroit had sold just over thirteen million new vehicles for the year. At the bottom of the crisis, Detroit was down to just under eight million vehicles.
During the same period, Japanese car sales did increase, but only from two point three million to two point six million. Detroit was down five million car sales; the Japanese only gained three hundred thousand.

That's right, the Japanese didn't destroy Detroit. Detroit was destroying itself blaming the Japanese instead of dealing with reality. And because of that, after the crisis and all through the eighties the Japanese did gain on Detroit.

While things slowly started getting better after Detroit's near failure from Nineteen seventy-nine to Nineteen eighty-two, the Big Three would feel lingering consequences. It took GM, Ford and Chrysler sixteen years until Nineteen ninety-four to sell as many vehicles per year as they had in Nineteen seventy-eight, the year before Detroit almost went out of business.

Story 89
Malcolm Lockheed Invents Hydraulic Brakes

Gretchen Carlson – NBC Five

Today when you hear the name Lockheed you immediately think of aircraft. However, back in the twenties Lockheed's reputation was based on Malcolm Lockheed's invention of hydraulic brakes - which is the reason your car still stops so quickly today.

There were two Lockheed Brothers, Malcolm and Allan. Both were educated at home by their mother Flora; with that education alone, both brothers grew up to be mechanical geniuses. Malcolm Lockheed was only seventeen in Nineteen oh-three,

when he first sketched out his design for mechanical brakes. At his mother's urging, Malcolm applied for a patent and was granted one just a few years later.

The next year Malcolm went to work for an automobile dealer in San Francisco and, in spite of his youth, became the person responsible for testing all that dealer's new automobiles before delivery. His brother Allan followed him, becoming a mechanic. In Nineteen seventeen the two brothers went into the aircraft business; and, although they built a marvelous plane, the Model G, the Lockheed's didn't make any money.

Allan Lockheed went back to being an automobile mechanic, while Malcolm went to Mexico and became the air force advisor to General Venustiano Carraza. Now the general only had one plane and refused to pay Lockheed, so one night he stole the General's bullet-riddled Paige automobile and drove it back home.

Malcolm used that stolen Paige to perfect his hydraulic brake system. He then assembled the media in Santa Barbara to show off his invention and the superiority of its design. How? Malcolm Lockheed drove that junky-looking Paige into a garage at thirty miles an hour and slammed on the brakes. The press was thunderstruck when Malcolm didn't hit the garage's back wall. Then Malcolm delivered his famous quote: "My brakes stop on a dime, and with change left over."

Malcolm then moved to Detroit to sell the car companies on using his brakes. Deusenburg was the first company to buy and use them. But it was Walter Chrysler's use of Lockheed's brakes on his first car in Nineteen twenty-four that made both men's fortunes. Allan, still on the coast, had started Lockheed Aviation. Sadly, however, it was Malcolm's success with brakes that cost Allan his aircraft business.

In Nineteen twenty-nine the Detroit Aircraft Corporation was started. The idea was to become the General Motors of that industry. On the board of directors were Edsel Ford, Ransom Olds, Henry Leland of both Cadillac and Lincoln fame, Roy Chapin of Hudson cars and Charles Kettering, GM's in-house genius.

One of the first aircraft companies they wanted to buy was Allan Lockheed's. Not because of the great Vega airplane he'd built, but because Malcolm's brakes had made Lockheed a household name. Allan was then thrown out of his own firm. Malcolm, disgusted with Detroit, sold his brake company to Bendix for more than a million dollars in Nineteen thirty-two.

Allan went on to sell real estate. Malcolm's story is even stranger: He became a gold prospector. For the next twenty-nine years he looked for gold unsuccessfully in Calaveras County, spending his entire fortune. The man who saved millions of American lives by creating superior brakes was living on welfare when he died on August thirteenth, Nineteen fifty-eight.

Today the Lockheeds' name lives on because of their aircraft business. But that company only kept the name Lockheed because of the reputation of Malcom's hydraulic brakes.

Story 88
Daimler Chrysler Merger
1998

David Gold – Salem Broadcasting

In a unique way the Second World War has still being going on during the Nineteen nineties. Only it isn't the German military crossing international borders armed with bullets to take over formerly independent nations, or the Luftwaffe trying to subdue England. Today it is the sons of the former Nazi regime who are successfully taking over the international corporate community. They're armed with nothing more than a large credit line and an international squadron of corporate soldiers armed with loaded checkbooks.

If you think that isn't true, consider that today Volkswagen controls the hearts and minds of automotive purchasers throughout Latin America and China. Audi has factories running full blast in Hungary. VW has also done a hostile takeover of Bentley in England. Mercedes produces a commuter car from a factory it controls in France. BMW has started building automobiles in Russia and has bought Rolls Royce and Rover out from under the British - both purchased by outmaneuvering their competitors.

So, with the German fronts secured from France to Russia to England, China and Latin America, it was now time for Germany to invade American shores and conquer Detroit. It was Daimler Benz's turn to come out of the trenches, but Daimler had more than its share of problems in the early nineties. A disastrous diversification plan by the former chairman, Edzard Rueter, had left the firm in a crisis. A new boss, Juergen Schrempp, was brought in to save Daimler's sinking ship, and he was the hardest of bosses. He immediately cut loose money-losing operations such as Fokker aircraft, leaving five thousand Dutch unemployed and on the streets. Other companies were also dispatched with a ruthless speed and determination. Daimler's core business, Mercedes automobiles, was saved by Helmut Werner; but Shrempp exiled Werner from the company party by severing him from his job, so Shrempp could take the credit.

Schrempp wanted his company to conquer the world, and he first set his sights on Honda, the car company that everyone in the industry wanted to own. However, Honda said no. The money was upped, not once but twice, and still Honda elected to go it alone. So Schrempp decided that he wanted the Ford Motor Company. Negotiations took place — in fact, that deal almost happened. Why didn't it? The Ford family wasn't willing to surrender control of its company to the Germans. The Fords had too much pride in the history of their family's contribution to life in America.

That left Chrysler - possibly the hippest American car firm of this past decade. All Schrempp needed was one American executive willing to sell his cherished and beloved company out from under the American public. Certain Frenchmen had set a precedent for this; General Marshall Foch, a World War One hero, easily and quickly switched sides during the Second World War and joined the Nazis, heading the Vichy political party in France.

This time the Germans had it easy. Bob Eaton, Chrysler's chairman, had no interest in the well-being of his company, his country, or his fellow soldiers, who had rebuilt the firm from nothing in the past decade. Eaton decided immediately to sell out his dedicated band of troops, who had fought so long and so hard, to the German aggressors - for personal stock options worth a little over a hundred million. Surrendering your army for personal gain? They shot people for that not many decades ago.

The Germans had successfully breached the shores of America. While the PR campaign made this the nineties version of British Prime Minister Neville Chamberlain's "peace in our time" pact with Hitler, Americans knew better. Our investors turned their backs on the new DaimlerChrysler Corporation.

Within ten months the Germans started the first of what will be many purges, leaving Thomas Stallkamp, Chrysler's president, out of a job as of yesterday.

Where it will go from here, no one knows. Only one thing is certain: The Germans have finally won the Second World War, for they have conquered the known world — at least, automotively speaking.

Story 87

Lee Iacocca – His Rise at Chrysler

Steve Eagar – Fox Four News

He was known as the father of the Mustang, and the man who gave America the minivan. What Lee Iacocca really was may have been the best car salesman this country has ever known. More than that, he knew what we wanted to buy years before we did. Iacocca suffered from only one flaw: He believed his own press.

Now, Iacocca did his best work when he was under the gun and scrambling for recognition. Once he was successful with a project he would start acting like royalty.

Consider how many hit cars, starting with the Ford Mustang in Nineteen sixty-four, he brought to market in the sixties. Now try to think of one memorable Ford vehicle from the seventies. Can't? That was the period when Iacocca was Ford's company president. Royal moguls aren't very creative.

Nonetheless, in July of Nineteen seventy-eight, Henry Ford the second fired Lee Iacocca from his family's firm with the famous line, "Sometimes you just don't like somebody." One month later, Chrysler chairman John Riccardo invited Lee Iacocca aboard.

Iacocca agreed to join Chrysler, but only if he could be chairman, which was Riccardo's position with the company. Riccardo, knowing the real depths of Chrysler's problems, agreed that he would step down within the year. Even Iacocca admitted a few years later that if he had known how bad Chrysler's financial problems really were, he wouldn't have taken the job.

The first clue of how Iacocca would use his power at Chrysler came at the first board meeting. Iacocca immediately lit up one of his customary cigars. Another board member told Iacocca there was no smoking in the boardroom. Riccardo jumped up and said, "As of this day, smoking is allowed."

Iacocca started firing top management at Chrysler first, realizing that they could still torpedo his decisions there. He brought in friends of his from Ford - and he stole Ford's ad agency. Hal Sperlich, who had worked with Iacocca for decades at Ford, was already at Chrysler, having been fired himself by Ford a year before Iacocca. He was working on the front-wheel-drive K cars, the Dodge Aries and Plymouth Reliant.

Now Iacocca went to work. He convinced Congress to co-sign loans of over a billion dollars to keep the company open. He himself did the commercials promoting the new K cars. He let Sperlich use the K car chassis as a basis for a new minivan, which was introduced in late 1983.

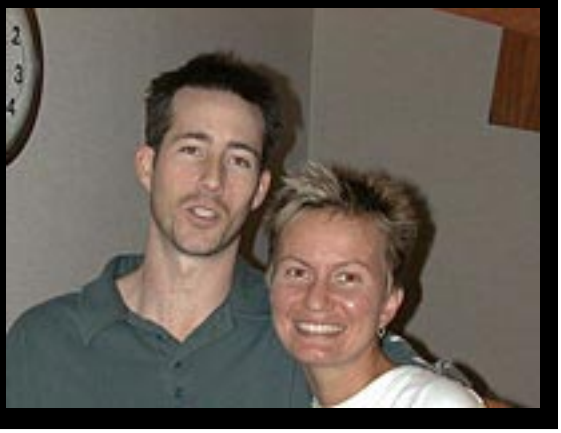
What Lee Iacocca did best was buy enough time for Chrysler to come out with new products - and then convince Americans that Chrysler was their beloved underdog car company. It worked.

By Nineteen eighty-four Iacocca was considered the best CEO of any major corporation in America. He then raised money to restore the Statue of Liberty. From there, however, everything went downhill. Bad investments drained Chrysler's then huge bank accounts. Iacocca refused to let new chassis be designed; by the late eighties every Chrysler car was a variation of the nineteen eighty K car chassis.

By Nineteen ninety Chrysler was in such bad shape that Iacocca tried to sell the company to Fiat - and Fiat turned him down. His lasting legacy is that the managers he brought to Chrysler saved the company in the nineties. In all fairness, though, Chrysler wouldn't have been there to save - and wouldn't be here today - if not for America's best car salesman, Lee Iacocca.

Story 86
Boeing Enters the Car Business –The Lunar Rover

Rogers & Monet – 93.3 Merge



First it was "one small step for man," and so on. Next thing you know, our astronauts couldn't wait to get a car on the moon.

You might ask, "Why even make a Lunar Rover?" Good question. The vehicle came about because NASA couldn't stand the thought of spending the kind of money we were spending to go to the moon to do research, only to spend a measly thirty hours there on each trip. That little time limited how far the Apollo crews could walk from the Lunar module for samples.

So, once we proved we could get to the moon and back safely, and with the advent of higher payloads on later Apollo missions, it was time to do real lunar research. And that meant cars on the moon.

Back in the early fifties, Werner Von Braun had actually forecast in Colliers magazine the need to have some type of automobile for lunar research. Now, fifteen years later, NASA found he was right — that prediction had to become a reality.

According to NASA memos from late Nineteen sixty-seven, their engineers believed that what was needed was a truly portable vehicle. A lightweight, electric car that folded up like a cot for the initial flight. It had to have a top speed of ten miles an hour and be able to negotiate some fairly hilly terrain.

Bid invitations for lunar vehicles had gone out the year before to both Boeing and Bendix Corporation. Both companies were testing working models in the Arizona desert in no time.

NASA made the final decision to go ahead with the Rover on May twenty-third, Nineteen sixty-nine. Boeing won the contract, and then found out they had only eighteen months to complete it. That ran the costs up. The sticker price ended up Forty million dollars. And no negotiating. A few Congressmen demanded to know how a lunar golf cart could cost so much, but NASA explained to them that Detroit usually spent a lot more than that on designing each new car they came up with.

On July twenty-sixth, Nineteen seventy-one, Apollo Fifteen's crew, commanded by Dave Scott and his two rookie astronauts Jim Irwin and Al Worden, took off from the Cape. Piggybacked on the side of the LEM was the first Lunar Rover.

On August first, Scott and Irwin took a seven-hour drive across the moon, covering eight miles and looking for some of the moon's original crust. On August second they took their second and last trip.

Now two more Lunar Rovers went into space with the Apollo Sixteen and Seventeen missions. Both of those also performed flawlessly. As for the forty-million-dollar price tag making these vehicles the most expensive cars ever built? Maybe Dave Scott said it best:

(Insert NASA audio) Scott: "By golly, Joe. This Rover is remarkable! I'm telling you, we have climbed a steep hill, and we didn't even really realize it! And we were going like ten clicks up this hill, and we're on a slope of at least eight to ten degrees. And we can look back and see the whole, see the LEM just as loud and clear as it can be. Gosh, I'll tell you, this Rover is really something."

For forty mill a piece, they ought to be.

Story 85
Ed Cole's V-8 Engines of the Fifties

Steve Smith - Car & Driver

His name was Charlie Wilson - or Engine Charlie, if you will. Wilson was on his way out as head of General Motors, having been handpicked by incoming president Dwight Eisenhower to become his Secretary of Defense. Wilson is best known for his misquoted quote, "What's good for GM is good for the country and vice versa." It was Wilson's last instructions to his replacement at GM, Harlow Curtice, that set the tone of fifties automobiles and made them a perpetual favorite, even today. GM, he relayed, would no longer tolerate Ford's gaining on the once powerful Chevrolet.

You see, the mighty Chevrolet division was falling behind the times and becoming dowdy. Ford was again making moves on Chevy for the low end of the automotive market - moreover, Ford was starting to win. One reason was that Ford had introduced a new V-8, while Chevrolet was still pushing its "blue flame" six-cylinder engine. Curtice had to move quickly to stop Ford's ascendancy and that meant he had to turn to just one man. That man was Ed Cole.

Cole had been a farm boy from Marne, Michigan, who couldn't wait to get off the family spread. He had originally wanted to become an attorney, but thought his natural gift of being able to fix anything that broke lent itself more to a career in engineering. So Cole attended General Motors Institute, but never graduated. Not

because he wasn't a good student: He was so good that Cadillac hired him before he could graduate.

The Second World War made Ed Cole's career and reputation. Assigned to GM's tank division, Cole solved all the tank's engineering problems, kept production on time and, unlike anyone else, loved the pressure of wartime production deadlines. After the war he returned to Cadillac and was instrumental in creating their first post-War V-8 engine.

Now he was being asked to put Chevrolet back on top in May of Nineteen fifty-two. He was also told to have the good deed done in two years. Cole loved it: It was just like a wartime mindset all over again. Overnight, Cole found the best GM engineers and grew his staff from eight hundred fifty people to over three thousand.

He had two things to create: an all-new car and an all-new V-8 engine. The engine was the tough part: It had to be small, to be used in the lighter Chevrolet chassis. It had to be balanced, and it had to have enough power to run all the new accessories that the public was starting to demand.

But Ed Cole made the deadline, and in October of Nineteen fifty-four the all-new Fifty-five Chevrolet was ready to go. It packed a revolutionary two hundred sixty-five-cubic-inch V-8 with one hundred sixty horsepower under its hood. Still considered one of GM's best engines ever, it was lighter than any previous V-8, incredibly well balanced and installed in Chevrolet's lowest body profile yet. And sales took off.

In Nineteen fifty-five alone, Ed Cole's new V-8 was used in more than two million vehicles. In fact, the Fifty-five Chevy reinvigorated the entire automobile industry, so much so that Americans spent sixty-five billion dollars on cars that year - an amazing five percent of our total gross national product.

All because Ed Cole believed that beating Ford was a mission worthy of the same effort as all-out war.

Story 84

Selling Cars on the Internet

Mike McGuire - 93.3 Merge

Who would ever have dreamed of selling cars via computers? Well, the granddaddy of them all was a company named AutoAdvantage. Not that they actually sold cars;

instead AutoAdvantage tied in with companies like CompuServe and America Online. Like other services, they simply referred their prospects to an affiliated dealership, taking a referral fee from both the buyer and the seller.

Then in the mid-nineties a Seattle-based Nissan and Volvo dealer named Martin Rood became the first to actually use the Internet to sell his cars online to the public. The media picked up on Rood's Internet story and published it nationally; almost overnight Rood had to hire a respectable number of people just to handle all the inquiries he was getting from the Net. However, those inquiries didn't lead to many sales. Rood finally sold his baby to the automotive accounting firm of Reynolds and Reynolds.

Next up, Smith Motors in upstate Idaho started selling Dodge trucks below invoice on the Net. Smith's story was a bit more remarkable, if for no other reason than that he briefly enjoyed an unbelievable success. However, this happened at a time when the Dodge Ram pickup was still in very short supply nationally and therefore was bringing a premium price at dealerships. Once Dodge prices fell elsewhere, Smith's business quickly followed them down.

Then the Internet was commercialized. Just a couple of years ago, companies from Auto buy Tel to AutoMall to Car Point started enrolling dealers nationwide to use their car buying services. It's still too early to determine the winners and losers in this strategy, but it should be noted that not one of these companies has ever turned a profit - in spite of the fact that some of them charge dealers up to twenty thousand dollars a year for their services.

Finally, in the latest stage of online sales, the automobile companies, from General Motors with their BuyPower Website to Ford's Design-a-truck site, are now encouraging customers to buy direct online and then go to a dealer to finish the transaction. So far these programs also have achieved only limited success.

So, what's wrong with the Net? Easy. Buying a car based on a J-Peg image, even with the promise of the lowest possible price, isn't all that attractive to the public at large. For one thing, people still want to go out to their local dealership and actually kick a tire, smell the leather, maybe drive the vehicle first. And besides, according to J D Power, eighty-four percent of customers are happy with the treatment they get from their local dealer. Therefore, they're buying cars the same way they always have.
Also, most people have trade-ins, which require an appraisal of value to determine a customer's trade difference. As most people know, you just can't get that figure for a sight unseen. Even in cases where you get your buying price on line, you still have to go to a dealer to get your trade-in's value determined.

Now for the most surprising of all statistics: Ruzheimer International, among many firms, has done surveys of people who have bought their newest automobile online. And they have found that, on the average, these people paid hundreds of dollars more for those cars than they could have just by walking into a dealership and buying.

While the future of the automobile industry online is still in question, not one company can claim any degree of success after eight years of trying. They may claim they sell a lot of cars, but they haven't made any money doing it. Still, the impact of the Internet on car sales moved this story way up on our list today.

Story 83
The Creation of Cadillac

Wendy Churchill
Frank Kent Cadillac

For the first eight decades of this century, Cadillac claimed that it was the standard by which all luxury cars were judged. To a large degree that was certainly true. However, it took two engineering geniuses and the First World War to put Cadillac on top to begin with.

Cadillac originally started life as the Henry Ford Company. It was incorporated on November thirtieth, Nineteen oh-one. Although it was Ford's second car company, most of its financial backing came from the exact same people who had lost their entire investment on Ford's first firm, the Detroit Motor Company. The lead investor was William Murphy, the one-time mayor of Detroit and a former friend of Henry Ford's father.

This time Henry promised to behave himself. He would devote his time only to the new car company, not to his outside racing interests. That promise would be broken. Within just a couple of months Murphy, paying an unexpected visit to the car company, found Ford and Oliver Barthel working on another race car instead of dealing with everyday car production.

Murphy was furious. More than that, however, he had a friend from church, Henry Leland, who just happened to own Leland and Falconer, Detroit's premier machine shop. Murphy proposed to Leland that he come in and take over the Henry Ford Company as managing partner, which Leland agreed to do.

Henry Ford was shown the door in early March of Nineteen oh-two, and the next day the company's name changed to Cadillac. Now Cadillac continued to build Ford's automobile, with one exception. Murphy started using a one-cylinder engine designed and built by Leland.

Here's what Leland brought to the table: First, he was the first engineer to build mechanical devices to tolerances as close as one ten-thousandth of an inch. His

engines and other automotive parts were legendary for their quality and durability. Then, however, Leland perfected the interchangeable parts system for automobiles. This made Cadillac the company to copy, both for quality and durability and ease of construction.

And in Nineteen oh-nine, William Durant, realizing that Cadillac could easily be considered the best of the American-made luxury cars, bought the company as the cornerstone of General Motors. Good move: Cadillac made money. Enough money that for many years, while GM was in its growing stages, the profits made from Cadillac kept GM from going under.

But it was the First World War that really put Cadillac on top in the minds of the public. You see, America's top military officers really weren't that interested in going over to Europe and jumping into muddy trenches to fight the enemy. As a group, the military demanded one inducement for signing on to go fight a war in Europe: If they had to go to Europe, they wanted to drive Cadillacs there. Our government gave in and bought more than two thousand Cadillacs, one for every Colonel and General's use in Europe.

Now at that time, high-ranking officers had the ultimate respect of the American public. If Cadillac was the only car that the military officers wanted, it must be the best of the best. So Cadillac, which already had a reputation as the standard for luxury, now also became known as the car that discriminating people demanded. And that's how Cadillac became the world's synonym for luxury and quality at its best.

Story 82
America's First Airline
Ford Motor Company

Rene Syler- Channel Eleven

As much as we marvel at the pace of technology today, our grandparents and great grandparents must have been just as astounded at the turn of the century. Suddenly, after thousands of years of either walking to get where we were going or at best riding or driving horses, the automobile had been created.

Then rumors came about in Nineteen oh-three that two brothers, who owned a bicycle store in Ohio, had successfully mastered the skies by flying an "aeroplane" near Kitty Hawk, North Carolina. In a period of just fourteen years mankind had gone

from a horse to a car, and then to an airplane.

Today any of us can wake up and decide we want to go anywhere in the world, and, courtesy of our many airlines, more than likely make our destination within twenty-four hours. But things were not always that simple, even after the airplane had been invented. It took the Ford Motor Company to create the first modern passenger plane and more than that, to create America's first airline.

Ford's first involvement with an airplane came in Nineteen oh-eight. A Ford employee named Charles Van Auken talked Ford into giving him the seed money to try to design and build an airplane. Powered by the Model T engine and made of wood, fabric and tubing, Van Auken's plane's maiden flight was successful right up until it struck a tree. That was enough for Henry Ford; to him, cars were much safer than airplanes.

However, Ford's son Edsel loved aviation. The year was Nineteen twenty-two, and the Ford Motor Company was still recovering from its near failure the year before in a terrible recession. William Stout had managed to get an audience with Edsel Ford, having known of his love affair with flying.

Stout talked Edsel Ford into funding the design of an airplane made completely of metal - unique, at the time, as everyone else was still designing aircraft with fabric-covered wings. The shiny new plane was built in record time and christened the Maiden Detroit. When Henry Ford heard what his son had done, he just rolled his eyes.

It was Stout's next airplane that changed everything. It was the famous Ford Tri-Motor, and it could seat twelve individuals. Edsel Ford was so excited about the new plane that he personally built Detroit an airport. And in Nineteen twenty-five the Ford Motor Company started America's first airline. From Detroit they flew first to Cleveland, then on to Buffalo, Cincinnati and Chicago. Ford's airline was the first to handle mail for the Post Office - after which airmail became the standard.

Ford dealers helped handle the weather aspect by calling Detroit daily with weather reports for their cities. For navigation, 10,000 dealers nationwde painted the names of their towns on the roofs of their dealerships. Primitive, maybe - but it worked.

In Nineteen thirty-three, because of the Great Depression, Ford got out of the airplane and airline business. However, make no mistake about it: It was Ford who showed others that airline travel was the wave of the future.

Story 81

America's First Indoor Showroom– Dallas Buick Co.

Thomas Quintana– Frank Parra

In the earliest days of automobile sales most people bought their automobiles direct from the factory. Which automobile and from who's factory depended on which manufacturer's car had won the latest, greatest automobile race. A system for selling cars directly to the public didn't exist, simply because there weren't that many automobile buyers. Actually, though most automakers produced a minuscule number of vehicles annually, there were still more car companies than car buyers.

So, in order to need dealerships coast to coast for people to buy their cars at, the industry first needed a mass producer of automobiles. That company was Oldsmobile, which had the first mass-produced, high volume car in America with its Curved Dash Olds. Still, at the time, sellers of cars were more brokers or agents than they were retailers.

However, the day of the indoor showroom and modern retailing of cars was just around the corner. In fact, it was in Nineteen oh-four that America's first indoor automobile showroom was built, right here in downtown Dallas, Texas. It was the Dallas Buick Company. By all accounts, it wasn't the largest of showrooms and there wasn't all that much parking for unsold Buicks in its upstairs garage. However, the concept and design of a dealership with a showroom display area where people could browse at automobiles in any type of weather held strong appeal for both car dealers and the public.

By Nineteen ten, six years after the opening of the Dallas Buick Company, the indoor showroom was catching on across America. The age of modern automobile retailing had begun, and it was born right here in Dallas, Texas.

Story 80
Rise of the Japanese Automobile Industry

Eddie Lee- Acura Motor Co.

For the first fifty years of this century the Japanese automobile industry didn't really exist as such. Sure, companies like Isuzu built trucks early on. Nissan struggled throughout the thirties, forties and even fifties trying to succeed. And Toyota was the laughingstock of the industry, its quality so bad that the Japanese military told Toyota during the war; no more military vehicles, please.

After the war, there wasn't anything but poverty in Japan - and no gas. That period lent itself more to companies like Honda. For Honda decided there was a far bigger market for motorcycles, which were both cheap and used little gas, than there was for automobiles - which no one could afford.

By Nineteen fifty Toyota was down to building three hundred trucks a month — having already phased out cars. Another factory had been converted; it was now making cookware and baking bread just to keep workers employed and their families alive.

So, what saved the Japanese automotive industry? Communism.

The chairman of Toyota, Shotaro Kamiya, had made the fateful decision to either sell the company or close it down. So he flew to Detroit and offered Toyota to the Ford Motor Company. Henry Ford refused, he wasn't about to pay money for a company as pathetic as Toyota. Kamiya then flew to Washington, where he asked the Pentagon if they would be interested in buying trucks from Toyota. They laughed.

So Kamiya started his long flight home, knowing that when he arrived he would have to dismantle Toyota. Then the miracle happened. During Kamiya's flight the North Koreans crossed the thirty-eighth parallel and invaded the South: Communism was on the move. The U.S. military, which had just met Kamiya and laughed at his offer, now ordered fifteen hundred trucks a month from Toyota, to be used in the Korean conflict by our military. Nissan, which was almost as desperate as Toyota, also received orders for vehicles. So did Isuzu.

In fact, that very short war gave the Japanese automobile industry enough orders and profits to stay alive. More than that, the Japanese car used those war time profits to improve their quality in hopes of one day exporting their goods.

Certainly in the sixties, when the Japanese came to America, they met with spotty and irregular success. However, they kept improving their products, and finally, the second miracle happened: The energy crisis of Nineteen seventy-three. It put Japanese cars on the map forever. For they were the most fuel-efficient automobiles available, built that way because Japan never had enough gas in the fifties. And their quality was now so good that Americans who bought them were stunned.

Don't be misled, however. The Japanese automobile industry is alive today only because two crises, for which America was in no way prepared. Too many Communists and not enough gas.

Story 79
Billy Durant Creates Chevrolet

Hardline- 1310 the Ticket.

April Nineteen ten. General Motors was on its way to a record year. Although not all of GM's twenty-five companies were making money, enough were that profits were almost assured. Then the floor fell out. It wasn't that car sales stopped, but that many of GM's bankers were concerned about founder Durant's non-stop acquisitions. What the bankers did to stop them was to close GM's credit lines.

Durant, desperate, went on a road trip. He proceeded to borrow eight million dollars in one hundred thousand-dollar increments from every country bank from Detroit to Des Moines. Then his lead banks told him they were going to force General Motors into bankruptcy, and recover what they could of their loans.

It was Wilfred Leland of Cadillac who convinced the bankers that GM was worth giving another shot - including another fifteen million in immediate loans. The bankers agreed, but took day-to-day operational control of GM away from its founder, William Durant.

Furious, Durant decided he'd do a little moonlighting. He went back to Flint, Michigan, the site of two major successes of his life, the Durant Dort Carriage Company and Buick, and announced that he would start two new car companies.

In October of Nineteen ten Durant asked Louis Chevrolet if he'd be interested in designing his own car. Durant knew Chevrolet from his Buick racing days, but didn't like the man because he smoked cigarettes. Nevertheless, Durant knew that his racing fame had made Chevrolet's name pure gold, and in late Nineteen eleven the

Chevrolet Classic Six made its debut. It was a hit, but didn't make any money. The other company that Durant started in Flint was the Little Car Company. It made a car called the Little Six. Not only was it less expensive than the Chevrolet, but it made money hand over fist. So, while Louis Chevrolet was vacationing in France in August of Nineteen thirteen, Durant merged Chevrolet and Little into one firm. On his return, Chevrolet was furious to find his name on what had formerly been known as the Little Six.

Then Durant really got to Louis Chevrolet. He told him he hated cigarette smokers, and that if Chevrolet wanted to be a real business executive, he should smoke cigars. Chevrolet replied, "I sold you my car and I sold you my name, but I'm not going to sell myself to you. I'm going to smoke my cigarettes as much as I want. And I'm getting out." And with that, Chevrolet quit his own car company.

Back at GM, stock value was falling like a rock, although the company was making great money. It was falling because the GM bankers refused to pay any dividends, instead using all the profits to pay GM's debts down to zero. So Durant quietly started buying GM stock back at its greatly reduced price, using the profits he was making from Chevrolet .

Nine months after he started his buyback of GM stock, William Durant showed up at the GM board meeting. James Storrow, one of GM's directors, walked up to Durant and warned him not to make any trouble that day. Durant calmly replied, "Sorry, but as of today I'm in control of General Motors." Durant had won: He owned fifty-one percent of GM's outstanding stock, bought with the profits of a company whose co-founder wouldn't quit smoking.

Story 78

Boss 302 Mustang's Influence on Japanese Styling

Cliff Johnson–Texas Motors Ford

It may be hard to believe, but the Japanese automobile industry used to worship cars from Detroit. As early as the Nineteen thirties Kiichiro (Kih - ITCH-doh) Toyoda tore Chevys and Fords apart, selecting the design elements he would use in his first automobiles. As recently as the Nineteen fifties the Toyota Toyopet was a five-eighths scale version of a fifty-five Chevy - minus horsepower and chrome.

One car might have influenced the Japanese more than any other American car, however - the Nineteen sixty-nine Boss three-oh-two Mustang. Its base price was just over three thousand dollars, but both men and women perceived it as incredibly

sexy. Dealers couldn't keep up with demand.

Three years later, as people were trading in their Boss three-oh-twos for a mere fifteen hundred dollars on newer cars here in America, a huge market emerged for those used Mustangs in Japan. Boss three-oh-two models brought as much as twelve thousand dollars there; and best of all, Japanese importers had a supply that might meet the demand for the car.

Toyota noticed the Boss three-oh-two's phenomenal used car sales and copied the car on a smaller scale for its Nineteen seventy-five Celica, right down to the little flip-up spoiler in the rear. Nissan had copied the original Mustang fastback with the original Z car, but the Celica looked so much like the Sixty-nine Boss three-oh-two Mustang that automotive writers wondered in print whether Toyota would have to pay patent rights to Ford for the design. But hey - even the original Honda Accord hatchback was a tribute to the Boss's overwhelming success in Japan.

Then came the Supra, and then the Eclipse. Men who as teenagers had lusted to own a Boss three-oh-two designed all of those Japanese cars. Even today, thirty years later, you can still see the outline of the Sixty-nine Boss three-oh-two Mustang in cars like the Acura Integra.

That model Mustang, however, might have been the last American car that the Japanese openly tried to copy. No other American car since then has had any discernible impact on Japanese auto design.

Today the sixty-nine Boss three-oh-two Mustang is still prized, only now by collectors. A completely restored sixty-nine will sell for close to thirty thousand dollars - far more than any of the Japanese spin-offs fetch.

Story 77
The Creation of the Jeep

B. J. Thomas

Very few no-frills vehicles have existed for so long or been so loved by the public as the original American jeep.

The year was Nineteen thirty-eight. Hitler had not yet formally started the Second World War, but our military was shopping a contract for a small, tough, four-wheel-

drive vehicle that could be used in any type of battle situation or environment. Three car companies were bidding for the contract: Willys Overland of Toledo, Ohio, Bantam, and Ford.

The Army originally decided against the Willys Overland design. Willys protested the decision: The company felt it could prove that the Army had not given the Willys Overland design for a General Purpose Vehicle a fair shake in the tests.

After a second, lengthier evaluation of the three vehicles, the Army brass agreed with Willys Overland, and the Jeep was born.

Of course, timing is everything. Just as Willys won the contract, the Second World War broke out. Instead of receiving orders for a few thousand vehicles, Willys built two hundred seventy-seven thousand Jeeps during the war.

Willys Overland's designs were everything they had promised and more. Jeeps were used as personnel carriers, litter bearers, recon vehicles, mud trucks, and even small machine-gun raiding vehicles. More than that, Jeeps worked in every battle environment, regardless of the conditions or the terrain. From the jungles of New Guinea to the mud flats of Eastern France, Jeeps took our boys to the battle and Jeeps brought them home.

In fact, a Jeep starred in the most famous cartoon of the Second World War. It showed a GI crying and covering his face as he pointed his forty-five pistol at a Jeep with a broken front axle. It looked as if he were putting it out of its misery - much as they did horses in the Eighteen hundreds.

After the war the public started buying war surplus Jeeps. After all, if they could go anywhere in war, they had to be just as good driving in the wilderness across America. The returning GIs bought Jeeps and took them into the deserts and mountains. You might say it was those GIs and their Jeeps who created our recreational vehicle industry.

Now, about the name Jeep. Many different stories exist about the name's origins. One claims that it is the acronym for the term General Purpose vehicle. Another attests that Jeep is what they call an Oklahoma truck loaded for drilling. The truth is, the name Jeep comes from Eugene the Jeep in the Popeye cartoons of the thirties. If you recall, Eugene the Jeep could travel between dimensions and solve all sorts of problems. That's what the soldiers felt the vehicle did in real life. So today, for those of you driving Jeeps or Jeep Cherokees, you should be glad to know that your vehicle is named after a cartoon character - and a soldier's term of endearment of what his vehicle did for him during the Second World War.

The Jeep has made a lasting impression on the world. Not only is the original version still built in some South American countries today, but just a couple of years ago, Mitsubishi in Japan was still building the exact same Jeep that Willys Overland designed way back in Nineteen thirty-eight.

Story 76
The Invention of Radial Tires

Kevin McCarthy -570 KLIF

The war years had been tough on the Michelin Tire Company. In the period of Nineteen thirty-one to Nineteen thirty-seven Michelin had gone through a major expansion, opening factories in Germany, Belgium, Argentina, Czechoslovakia and Spain. But by the time the company's founder and chairman, Edouard Michelin, died in Nineteen forty at eighty years of age, the German army had taken over every country in which Michelin did business. Moreover, during the Nazi occupation of the war, Michelin's home country, France, was cut off from nearly all raw materials. It seemed that everything Michelin needed, the German army needed more.

So the firm converted its factories, and its workers made items such as wood-burning stoves and wire brushes, and made sandals out of old tires. With the war going on and France occupied by the German army, Michelin's engineers found they had more than their fair share of free time on their hands. They certainly had no pressing company engineering work to do. One engineer in particular took the opportunity to play with a few ideas he'd had on improving the performance and durability of Michelin's tires.

That engineer was Marius Mignol [min-yol]. And Mignol's idea for a better tire was actually just a simple design change. At the time all the plies inside of a tire were formed by having the cords crisscross each other at sharp angles. Mignol correctly recognized that one could change the interior cord design of a tire and have them cross each other in a radial pattern. This would give the tire more flex on rougher roads, along with stronger sidewalls for hard cornering. The final plus to this new tire was the fact that a radial cord design actually doubled the tire's tread life.

Mignol and Michelin perfected their new radial tire, and it was ready to market in Nineteen forty-seven. Called the Michelin X - no relationship to Malcolm - the radial tire didn't really catch on, in spite of the fact that it was truly superior to any other tire then on the market. The reason was that Michelin didn't have enough factory space to produce the radial tires in any real numbers. So, knowing that it could sell all it had and couldn't build any more after that, Michelin didn't spend a great deal of money promoting its new design. And, because Michelin didn't make a big deal out of its radial tires, no other tire manufacturer took the time to compete with Michelin's designs.

Starting in Nineteen fifty-five and continuing through Nineteen sixty-nine, however, the Michelin company built a new tire factory each year, opening fifteen plants in that fifteen-year period. Yet by Nineteen seventy, Michelin's radial tires were still on an allocation schedule to its dealers. This was because word was beginning to spread in the sixties about how superior the Michelin radial really was. Even as late as Nineteen seventy-four, the American luxury cars delivered to dealers had bias-ply tires with a life span of less than ten thousand miles. As an option radial tires cost only one hundred fifty dollars, but no dealer ordered the better tires on his inventory of new cars.

By the late seventies Michelin's production rates were high enough that its potential dominance of the radial tire business became a real concern for other tire makers. As every other company moved into the radial business, prices fell; and as they fell, drivers everywhere switched to radials.

The design for what would become the standard in superior tires came from one French engineer, Marius Mignol, who took his World War Two break in normal work activities and created the Michelin X, the world's first radial tire.

Story 75

America's First Strip Shopping Mall

Jim Hardick –Troy Aikman Chev

Under the theory that men are hunters and women are gatherers, it's universally accepted that the two sexes perceive the automobile quite differently. Ask a man to name the most thrilling thing about his automobile and more than likely he will tell you it's the power and handling characteristics.

Now ask a woman what a car does best for her and more than likely, if she's really honest, it's that the vehicle carries her about her daily life and most important, takes her shopping.

At the turn of the century as the automobile first started appearing on America streets, those who lived in the cities found themselves shopping mostly downtown. Certainly that's where all the larger department stores were. Even as automobiles became much more widely available to the public, it was still the custom for women to drop their husbands off at work in the morning and then use the family sedan to run their errands downtown, where merchants were centrally located.

Traffic from female shoppers became so bad that in Los Angeles the city council

actually banned automobiles from the downtown area during daytime hours so that company vehicles could make their daily runs. Although the ban only lasted a few months, the LA merchants came up with a new way to handle the automobile traffic and stay in business. They moved their stores slightly out of the downtown area of Los Angeles and invented the parking garage. The crowds went wild; convenient parking quickly became the main selling point in most of the major department stores' ads.

The automobile also allowed greater mobility, and because of that a new type of American merchant evolved: the specialty shop, or should we say the large group of specialty shops. They grouped together to entice automobile owners to come shop in less crowded surroundings. As a bonus, only a minimal parking area could handle customers' cars while they were shopping.

Today we know that arrangement as a strip center; its technical name is a unified commercial development block. What you may not know is that that's also a Dallas invention. America's first strip mall, built and opened in Nineteen thirty-one, was the Highland Park Shopping Village, at the corner of Mockingbird and Preston Road.

Immediately, shopping patterns began to shift out of the downtown area and into the suburbs. In fact the concept's intrinsic value was so readily understood that strip centers started opening across America as quickly as they could be built. And this was during the Great Depression!

Today you can't go down any major street in America without passing a strip center mall at every other intersection. And the one that started it all? It still exists, and it's as popular as ever, right here in Dallas.

Our driving habits created the Highland Park Shopping Village, and because of it and others like it, our driving and shopping habits changed forever.

Story 74
Ford Creates Radio Navigation for Airlines

Burton Gilliam -Actor

It was an era best known for stunt flyers, but by the twenties the concept that aviation could also be used as a means of high-speed travel for the America public occurred to both the government and private industry. There was one minor problem: planes couldn't find their destinations in bad weather. And, until that problem was solved, this country's future airlines would never get off the ground.

The Ford Motor Company had started America's first airline. And its original system of navigation was primitive at best. Henry Ford had asked all of his dealers to write the names of their towns on the rooftops of their dealerships. That way pilots could follow their route by using a simple road map to their destination. However, that system of navigation only worked during daylight and in good weather.

For some time starting in the early twenties, the United States Bureau of Standards and the U. S. Army had been working on a system of using radio beacons as air-navigation aids for pilots. However, they hadn't had much success. Henry Ford, having launched his own airline business in Nineteen twenty-five, was concerned for the safety of his pilots and passengers. Ford had also read about the government's mostly failed efforts to use radio beacons for navigation.

Now in Nineteen twenty-six the government had all but run out of funds for that project, so Ford decided it was time to take it over.

Henry Ford gave Eugene Donovan, part of the Army's research team, the opportunity to come to Dearborn and work with Charlie Thomas on perfecting the concept for radio navigation. Donovan eagerly accepted, and he and Thomas went to work. It took the two gentlemen less than a year to perfect the device.

What Ford's men had come up with was a radio transmitter that could send its waves out in a specific direction, instead of broadcasting in all three hundred sixty degrees. If a pilot could line up on one particular radio beacon, he'd know he was on course for that specific city. If the pilot veered too far to the right he would hear a dot-dash in Morse code. Too far to the left it would be dash-dot. Centered on the course, the pilot would hear the steady hum of the two coded waves merging together.

On February sixteenth, Nineteen twenty-seven, Ford's men set up the first radio beacon tower at McCork Field in Ohio. Harry Brooks, piloting a Ford Tri-Motor, took off from Dearborn for Ohio in a heavy snowstorm, using only the radio wave beacon to find his destination. The system worked perfectly. Because of Ford's belief in his company's ability to solve problems, commercial airline traffic could now start in earnest.

As he did all of his designs that promoted the nation's advancement, Ford patented his radio navigation system, but allowed anyone to access and use those patents free of charge. By the way, it is a variation of Ford's system that stills guides the world's airliners safely to their destinations today. So your safe arrival after a long flight is all thanks to Henry Ford.

Story 73

America's First Drive In Restaraunt – the Pig Stand

Scott Murray – NBC Five

Eating in your car. You've done it, and every time you drive down the road you'll see other people do it. Your mother told you not to spill your food in the car and today you warn your children of the same thing. We're a nation on the move, and that means drive-in restaurants. And those were created right here in Dallas, Texas.

Drive-in restaurants are a variation of a customer service provided by pharmacies as far back as the late Eighteen eighties. That's about the time that the soda fountains started appearing in them. Besides selling medicine for what ailed you, pharmacies found they made even more money serving sodas and cooking hamburgers. Soon customers were pulling up in their carriages for medicines and Coca-Colas, and pharmacies started carrying their goods and food out to the curb.

When the automobile appeared, places like Dallas' Edgewood Pharmacy had their staff walk your order out to you. It was no longer necessary to leave the confines of your automobile to be waited on. That idea - serving people food without their ever leaving their automobile - appealed to Jessie Kirby, a Dallas candy and tobacco magnate. With his partner Rueben Jackson, a doctor, they created the world's first restaurant designed from the ground up only to serve people in their cars.

Don't laugh, but Kirby's personal belief and motivation for his investment in a drive in restaurant was that, "People with cars are so lazy that they don't want to get out of them to eat." In the fall of Nineteen twenty-one America's first drive-in, actually a small shack, opened on the old Dallas-Fort Worth Highway. Kirby named it the "Pig Stand."

The menu was fairly limited - not much more than pork sandwiches and soft drinks. However, the carhops were friendly, service was good and the food was better than anyone expected. Within a few weeks the "Pig Stand" was always full of cars.

Within months word of the drive-in's success spread across Texas and the nation. Imitators sprang up everywhere. Pig Stand drive-ins could be found in most large Texas cities. However, the originators of the concept, Kirby and Jackson, gave the company over to their favorite carhop, Royce Hailey, who was responsible for the "Pig Stand's" massive growth.

It should be noted that Hailey also tried to rewrite the company's history by saying the original drive-in was named Royce's Pig Stand.
Today as you drive by your McDonald's, Burger Kings, Taco Bells and the like, remember that the whole thing started with a Dallas doctor and a candy magnate, who honestly believed, and spread the gospel to their workers, that their drive-in would succeed because you and I are too lazy to get out of our cars. Even if we have to eat.

Story 72
The Creation of the Honda Motor Company

Johnny Rutherford-Legend

If you took a survey today of automotive engineers and heads of major car companies, asking which automotive engineering group is the most admired in the world, all of them would answer "Honda." That consensus isn't all that amazing, - if you knew Soichiro (So-wee-che) Honda.

Honda was born just after the turn of the century to a poor farm family in Iwata Gun Japan. As a sixteen-year-old he successfully begged his father to let him go to Tokyo, where he became an apprentice at an automobile repair shop. When his apprenticeship ended, he returned home and set up his own garage.

From the very beginning Honda's reputation spread as the man who could fix anything on an automobile. Then he moved on to piston manufacturing, although he had to attend college to learn why his pistons all cracked in use.

In the thirties he became one of Japan's top racecar drivers, although he was almost killed in the All Japan Rally of Nineteen thirty-six; he spent over a year in the hospital after that wreck.

During the war Toyota bought pistons from Honda, and Honda invented a machine that honed and balanced aircraft propellers. He was declared a national hero for that invention, though, ironically, Honda was personally disgusted with the Japanese war effort.

At the end of the war Honda sold his piston business to Toyota for two hundred thousand dollars. The first thing he bought was a fifty-gallon drum of medical alcohol to make Sake. Honda drank and partied for the next two years, waking up in early Nineteen forty-seven to find he was hung over and broke. The party was over: He went to his father, borrowed thirty-five hundred dollars, and started a motorcycle

company.

Honda bought small military surplus engines and attached them to bicycles. But his customers needed fuel to ride, so Honda went into the forest at night. There he cut the roots of pine trees to make turpentine, which he added to gasoline to make the premixed fuel his two-stroke motorcycle engines used. When the military engines were no longer available, Honda created his own.

Looking for dealers in Nineteen forty-nine, he wrote personal letters to each of Japan's eighteen thousand bicycle dealers, asking them to sell his motorcycles. Within a couple of months five thousand bicycle dealers in Japan were carrying Honda motorbikes.

He raced his bikes where people said he couldn't win - and he won. When the Japanese government told him not to build automobiles, he ignored the command and built them anyhow.

All his life Honda fought the establishment and his circumstances because, more than anything else, he wanted to build the perfect engine. He only built motorcycles, cars, lawn mowers and generators so he could put those engines to work. Honda was the man who would never take No for an answer - and, following his lead, neither will any of the Honda engineers who have succeeded him. When Honda passed away in the early nineties a reporter wrote this tribute for his obituary: "Truly, the man was born with gasoline in his veins." He must have transfused that trait into the staff he left behind.

Story 71

Emissions Equipment on Automobiles

Rene Isip & Tom Tyrell
Lute Riley Honda

Los Angeles has probably always had the worst atmospheric smog of any city in America. Each year since Nineteen forty-seven, when LA started monitoring its air quality and keeping records, the city's air quality had steadily deteriorated. By the mid-sixties California couldn't take it anymore. So, the first state to force automakers to add pollution devices to any Nineteen sixty-eight-model cars they sold inside its borders was California. Of course, there wasn't much to it: A simple PCV valve lowered exhaust pollution slightly.

But Congress had also taken up the cry; it passed the Clean Air Act of Nineteen seventy. Heading the legislative "hit list" was the American automobile, and this new law mandated, just for starters, that within five years all new cars sold in this country

would have to create seventy percent less pollution. But this is America: If the Honda Motor Company hadn't exposed Detroit's foot-dragging, Detroit would probably have lobbied that law's stringent provisions out of existence.

Here's what happened: When the law was passed, Honda immediately began working on a gas engine that would meet the new federal pollution standards. Detroit, on the other hand, immediately began working on its lobbyists, urging them to talk Congress into making the mandate less harsh. Two years into the mission, consequently, Congress decided to find out whether it would actually be possible for anyone to meet the guidelines set out in the Clean Air Act of Nineteen seventy, and held a hearing on the matter. GM testified that there was no way it could put those cleaner vehicles on the market in just two and a half years. Ford said hey, if GM can't do it, we can't either. Chrysler backpedaled too. No one even expected little American Motors to be able to do it.

Then it was Honda's turn. Now remember, Honda was a newcomer to America. Didn't sell that many cars, either. Nevertheless, Hondas representatives stood up in that hearing and said, Yes, we already have a car that meets the Nineteen seventy-five standards in fact, the EPA has already approved it. As you can imagine, the Detroit executives chins almost hit the ground.

In just fourteen months Honda had created its CVCC or Civic engine, and it was as clean as the government wanted it. Detroit protested that it only met the standards because it was a puny four-cylinder engine. So Honda put Civic heads on both Chevy and Ford V-eight's, and guess what? They met the standards too.
Well, naturally, big, proud Detroit wasn't about to use tiny, Honda's design. Instead, GM engineer Bob Stempel and his staff, with wartime powers and in record time, created the catalytic converter. Which GM then sold to Ford, Chrysler, and AMC so they wouldn't have to buy from Honda, either.

Because America pushed its automobile industry into doing its part for clean air, Honda embarrassed Detroit in front of Congress in Nineteen seventy-two.
Then GM saved Detroit's collective hide for Nineteen seventy-five. Ford first used computer chips in Nineteen eighty to make its engines even cleaner, and everyone followed that lead. Today, cars are more than ninety-seven percent cleaner than they were twenty-five years ago.

Story 70

The Ozone Hole Debate

Dale Groom- The Plant Groom

Twenty years ago, the average person on the street had never even heard of the term "ozone hole," much less worried about whether its existence was going to have an impact on his or her life.

Scientists discovered the ozone holes during the International Geophysical Year, or IGY, of Nineteen fifty-seven. Of course, at the time we really didn't have the technology to properly measure the holes; and, because they had just been discovered, we had no way of knowing how big they'd been in the past - or if they had even existed.

By the seventies scientists believed that they were witnessing a widening of the ozone holes over the poles, with the South Pole the more critical of the two. Of course we have no way of knowing whether the ozone hole was really widening, or if scientific instruments, which were getting remarkably more sensitive, were only now finding out the true size of the hole. However, like B grade movies, science always gives us a villain for mysteries. In the case of the ozone hole that villain was Rula Lenska. Or at least she symbolized the villain in this story.

For Rula Lenska was the television spokesperson for some obscure hairspray product - one of many products that contained CFCs, or chlorofluorocarbons. For it was Freon that was used as a propellant to get the hair spray out of the can. Of course Freon was also used to run the air-conditioning units for your cars and home.

Scientists blamed our use of CFCs for the destruction to the ozone layer. Stories about the lack of ozone causing cancer spread quickly. But there were more than a few critics of the ozone hole story - about half of the legitimate scientists in the world, in fact. First, they knew that we hadn't even been able to detect the ozone hole just decades earlier. In addition, they knew that chlorine also destroyed ozone. When Mount Pinatubo in the Philippines blew in Nineteen ninety-one, it released more chlorine gas into the atmosphere than all the Freon ever made by man. They also pointed out that CFC atoms are heavier than air; they had a hard time believing that a heavier-than-air element could find its way to the upper atmosphere, much less make it to the South Pole. Finally, that group pointed out, the interaction of sunlight and oxygen creates more ozone every day - more, in fact, than the maximum daily amount of CFCs man puts into the atmosphere.

Still, the story of mankind's demise from the widening ozone holes kept making front-page news. So the more developed countries signed the Montreal Protocol, agreeing to change the chemicals we use to cool our cars and homes. The car companies immediately jumped onto the CFC-free air conditioner idea, and manual pumps replaced the aerosol cans of the seventies. All this costing billions and billions of dollars, for something that may or may not be true.

One final thought: Scientists just released new data that show the ozone hole over the South Pole is contracting, that it's the smallest it's been since they started studying it. Proof, they say, that phasing out Freon and the like is working. But these scientists have always said that it would take a CFC molecule seventeen years to make it to the South Pole ... and back in Nineteen eighty-three, Freon cooled the world.

Story 69
The McDonald Brother's Drive In

Norm Alden – Actor

Maurice and Richard McDonald started out in California's movie business, having moved from their native New Hampshire in Nineteen thirty during the Great Depression. During most of that decade they owned a company that transported movie sets to their shooting locations. One day in Nineteen thirty-seven, when they were working in downtown LA, they ran into Walker Wiley, who was selling hot dogs on a street corner near a large group of office buildings. The McDonalds asked how his business was doing, and the man replied that he was earning more than a hundred thousand a year. To the McDonalds that was a fortune, and for what looked like a fraction of the work they were doing.

So, the McDonalds quit the movie industry and opened an orange juice stand near the Santa Anita racetrack. That didn't go over as well as they had hoped it would. So in Nineteen forty, the two brothers literally cut their orange juice stand in half, moved it to the corner of 14th and E Streets in San Bernardino, and put it back together. There the brothers offered diners a full menu - everything from hamburgers to barbecue.

Then one night, as Maurice was totaling the monthly receipts, he realized that eighty percent of their business was in hamburgers. So in Nineteen forty-eight the brothers decided to close down their successful store, remodel, fire the carhops and reopen as a hamburger-only drive-in.

At first their business fell off to nothing. They had to tell their employees to park their own cars in the parking lot so it would look like they had business. Then, in desperation, they added french fries and malts. Business took off. By Nineteen fifty-two the two brothers were sharing one hundred thousand dollars in annual profits, which wasn't bad, considering that their hamburgers sold for fifteen cents apiece.

However, you already know how the story ends. The McDonalds got rich, but not as rich as Ray Kroc, who bought them out early and then went on to create a hamburger dynasty. Then others realized how much money there was in fast-food drive-in restaurants. Now they are everywhere.

And it all started on the day that the McDonald Brothers said goodbye to the movie industry for hamburgers - and customers on wheels.

Story 68
The Bronx River Parkway –First Divided Highway

Bobby Mitchell – 99.5 the Wolf

Ask anyone today to name the most important factor in buying an automobile and they'll probably say "safety." Of course the sad reality is that there once was a time when cars weren't very safe at all. Even by the early twenties we still had no such things as safety glass, seat belts, or even doors that didn't fly open in the most minor of side impacts, spilling the car's occupants out onto the highway.

Another unsafe thing about cars was their tires. At the time, they were quite narrow, which meant that the second the weather got bad automobiles had a nasty tendency to start slipping and sliding all over the road. More than likely, it would be another automobile coming in the opposite direction that would stop a vehicle out of control.

Something had to be done to stop people from smashing into each other in needless head-on collisions. However, at the time Detroit couldn't have cared less about its cars' inherent instability. Nor did the public demand that Detroit do anything: They were too busy just enjoying the fact that they owned automobiles.

No, it was left to highway engineers to figure out a way to separate automobiles going in opposite directions, and therefore lessen the likelihood of frontal impacts. Of course, highway engineers knew that things were about to get much worse, at least as automobile safety was concerned. After all, by the start of Nineteen twenty there were over eight million cars on America's roads. And, for the first time in our history, more people lived in cities than in the country. However, even with the start of Prohibition in Nineteen twenty, anytime the roads got wet - front-end collisions.

Fortunately, in Nineteen oh-seven a New York City road engineer by the name of Gilmore D. Clark came up with an almost foolproof system: Create a large median between the two lanes of opposing traffic, he said, and watch automobile accidents drop dramatically. It's amazing now, but no one else had thought of it.

Well, it took sixteen years to build, but in Nineteen twenty-three the Bronx River Parkway opened. It was the first divided highway in America. Sure enough, though from the very start it was one of the most traveled roads in the country, it was also one of the safest.

So, did America, realizing how much safer that type of highway design was,

immediately copy it everywhere else? No, not really. Although the Bronx River Parkway proved the safety aspect of divided roads, it took decades for America to start building most of our high-speed roads and highways with medians separating their lanes. Moreover, to this day, we credit the German Autobahns with teaching us that it's smarter to separate two opposing lanes of travel.

And where did the Germans come up with that idea? From the Bronx River Parkway in New York City, all the way back in Nineteen twenty-three: Our nation's first divided highway.

Story 67
The Death of Cari Lightner
-The Formation of MADD

Shirley Washington
- Fox Four News

Fair Oaks California, Spring of Nineteen eighty.

She was just a twelve-year-old girl: Pretty, sweet, but not too different from millions of other young American girls. He was a twice convicted drunk driver who had been out on bail for his third DWI arrest less than 48 hours. Her tragic encounter with this man one Monday night on her way to church would trigger a movement that would forever change American society's permissive attitude toward drinking and driving drunk.

Cari Lightner could have been any girl approaching her teens. Her mother was a real estate agent, and by all accounts Cari was popular in school. On a Monday night, May fifth, Nineteen eighty, to be exact, Cari asked her mom if she could go to a church carnival with a friend of hers from school. Smilingly giving permission, she watched Cari and her friend talk and giggle as they walked away toward the church. Candy couldn't know it was the last time she would ever see her daughter alive.

As she and her friend walked the short distance, Cari was struck and killed by a drunk driver. It was a senseless tragedy, but one that happened thousands of times a year. Cari's death, however, would change society.

Decades earlier even Henry Ford himself had discussed the problems that he foresaw coming with the automobile and drunk drivers. In the days of horse-drawn carriages and wagons, Ford knew, if the driver was drunk the horse would find its way home - but a drunk automobile driver would be a menace to himself and everyone on the road. And certainly, over the next sixty years numerous laws were passed making drunk driving a crime.

But none of those laws seemed to be relevant to the judge hearing the case against the man who had killed Cari Lightner. Although Candy Lightner produced proof that the man who had killed her daughter had been arrested three times for DWI and convicted twice, and showed evidence that this particular man had been arrested just two days before he killed Cari on another DWI offense, none of it seemed to impress the judge much at all. The ruling was this: For taking the life of twelve-year-old Cari Lightner, the man was allowed to plea bargain to the reduced charge of vehicular manslaughter. His sentence? Two years in prison - which the judge reduced to time in a work camp and then a halfway house.

Candy was stunned - and outraged. Very quickly, she mounted a personal crusade to protect other mothers and their children from the incredible injustice her daughter's killer had gotten. In December of that year, Nineteen eighty, Candy Lightner quit her job in real estate and formed Mothers Against Drunk Drivers; today it's a household term with more than a million supporters. Since the inception of Mothers Against Drunk Drivers, Americans have enacted thousands of pieces of legislation that make people who drive drunk criminals. Other laws now protect the rights of the victims' families and ensure justice in the worst cases.

And still, since Cari Lightner's death almost twenty years ago, even with stronger laws and much safer cars, more people have died in drunk driving accidents than in our past three major wars. Candy Lightner left MADD early on, saying, "I don't want to deal with victims' issues anymore. It's sad and depressing." But through her passionate quest for justice, the memory of Candy's sweet twelve-year-old daughter - and of Cari Lightner's needless death - gave America its wake-up call on drinking and driving.

Story 66
Ford's River Rogue Factory
Dave Williams
-Regency Lincoln Mercury

The world had never seen a factory like the Rouge River complex built by Henry Ford. Today we talk about lean production in automobile manufacturing, but Henry Ford invented the ultimate in lean production: A factory so large in scope that raw materials were fed in at one end and finished Model Ts rolled out the other side four days later.

To Ford and his production men, Charles Sorenson and Bill Knudsen, the moving

assembly line was just one step in the process of lowering the production cost of their automobiles. Within a year of installing the moving assembly line, Ford started looking at what the effect would be on his profit margins if he stopped buying any parts from outside suppliers. For that to happen, he realized, he would need a factory in which he controlled and manufactured everything.

They say that there's a fine line between genius and madness. The Rouge River factory was probably the product of Ford's genius at the start - and of his rampant paranoia at the end. For Ford had reached the point of trusting no one, especially his suppliers, and it was that mistrust which motivated him to create the Rouge.

Buying up two thousand acres of marsh in Dearborn, Ford started building his vision of the future for industrial complexes there. Some production had started in the Rouge's B building by Nineteen eighteen. The next year the coke plant opened. In Nineteen twenty, Henry's two-year-old grandson held the match that lit the Rouge's main blast furnace.

The complex was unlike anything industry had ever seen. For now Ford owned the coal mines, the steel mills, even the boats that brought the raw materials up the Rouge River. And shortly he would buy plantations in Brazil so he could control the rubber for his tires.

There were ninety buildings on the two-thousand-acre Rouge proper, along with ninety-three miles of railroad tracks. Forty-two thousand employees reported to work there every day. They would take iron ore, coal, rubber and leather and turn it into record numbers of Model Ts in record time.

For many years Rouge River was the most integrated factory in the world. Its fame, however, was short lived: Within five years of its completion, the days of the Model T were over. During the thirties, the Rouge was the scene of many of Ford's most serious labor problems, further tarnishing its reputation.

By the early fifties, when Eiji (Eh-eejdge)Toyoda took a job at the Rouge - to learn secrets he could take home to Japan to help his family's company - he concluded that the Rouge's glory days were long past. However, Henry Ford had changed industry with his creation of the Rouge River factory. On its completion in Nineteen twenties it was the new symbol of American industrial might. Then as the Rouge followed the decline of the late twenties, it came to symbolize the war between corporate America and labor in the thirties.

During the war it regained a little of its reputation, but by the fifties it was a mere reminder of how great Ford had once been. Still, no American car company ever built anything like it again. Today it still boggles the mind to think that once upon a time, there was a factory where raw materials went in and cars by the millions came out.

Story 65
Daimler & Benz Merge
1926

Kidd Kraddick – KISS FM

Germany's economic problems in the twenties stemmed from the First World War, and from the restraints the Treaty of Versailles put on Germany's people and industry. In the following decade few Germans could afford a small economy car, much less Daimler's or Benz's expensive sedans. By the early twenties even Opel had cut back to building less than a thousand units annually, and that was with five different models available. Opel was forced to start manufacturing bicycles and motorcycles on the side to stay in business.

Ford had moved into German production - Chevrolet had, too. The average German car consumer recognized as fact that both GM and Ford products had much higher quality than any German car at the time.

In Nineteen twenty-three Daimler decided to start building automobiles that were less expensive than its current line of Mercedes cars. That move didn't help.

By Nineteen twenty-five both Benz and Daimler had passed the point financially where prudence dictated that both companies should be liquidated. But there was a problem: Neither the German government nor its financial community was willing to let the two companies, whose founders had created the modern automobile, quit and let the Americans take over Germany's automobile industry.

In Nineteen twenty-four Daimler and Benz entered a union of interests, trying to share costs in order to lower both companies' overhead. That particular plan didn't work as well as anticipated. Now it was the bankers' turn to save the companies, and in Nineteen twenty-six they formally merged the two companies. The merger agreement stated that the new company would be called Daimler Benz. However, it would build the Daimler Mercedes line of automobiles, as that name had the widest international recognition. Daimler's three-pointed star would be the hood ornament, but the company logo would combine both firms' previous symbols.

Names, logos, hood ornaments - none of it overcame the dismal truth: Their quality was still horrible. No, it took Adolph Hitler to make Daimler Benz the world's best engineered and built automobile.

You see, when Hitler was campaigning for Chancellor in the early thirties, he didn't

use a Mercedes-Benz for his personal car - they were too unreliable. Instead Hitler toured Germany in a Czechoslovakian Tatra. Once he came into power, though, Hitler demanded that the management of Daimler Benz improve quality; and then, Hitler started driving the Daimler-Benz's Mercedes.

For the rest of the world Mercedes came into its own for a second time with the introduction of the classic three hundred model in Nineteen fifty-one. Among the celebrities who purchased a three hundred were Yul Brynner, Gary Cooper, Frank Lloyd Wright, Indian Prime Minister Nehru, the Shah of Iran and Bing Crosby. Moreover, to show that he bore Germany no hard feelings over the war, Field Marshall Montgomery bought one to drive around his estate in England. Mercedes-Benz had come of age.

Story 64
Creation of Front Wheel Drive
Bo & Jim - 92.5 FM

To understand the concept of a front-wheel-drive automobile, visualize a stagecoach with a team of horses pulling it across the plains. Now picture the horses behind the same stagecoach, pushing it. You can see that steering and directional control would be far more difficult that way.

Of course the automobile industry ignored this basic fact of physics when cars were first invented. Why? Because a front-wheel-drive mechanism was far too complex a system for them to design and produce. However, like most revolutionary gambles, front-wheel drive was the creation of one of the industry's greatest geniuses, and resulted from the depth of his financial problems. On the verge of bankruptcy, Andre Citroen would change the automotive world forever.

To be fair, several car companies had made either prototypes of front-wheel-drive cars or limited production runs of this unique drive train: Alder in Germany, Alvis in England, Ruxton and Cord in America. But none of those vehicles had sold well - or, frankly, worked well. Now it was Nineteen thirty-one - two years into the Great Depression. Andre Citroen, who'd always had cash-flow problems even in boom times, realized that he needed to design and build the world's most advanced automobile if his company was to avoid economic ruin. It was also that year that Citroen traveled to America to visit with the Budd Corporation, the patent-right holders to all-steel-body cars. There, when Citroen was shown a prototype front-wheel-drive Cord designed by Joe Ledwinka and William Muller, he saw the future. For Citroen immediately realized the inherent stability that front-wheel drive would give an

automobile.

Back in France, Citroen put his best engineers on his new idea.

Jean-Albert Gregoire [zhon-ahl-bear gruh-gwahr] was put in charge of designing the suspension and the front wheel drive. Pierre Franchiset [fron-shi-say] designed the car's structure. Flaminio Bertoni [fluh-mee-nee-yo bear-toe-nee], an Italian sculptor who had never designed a car, now did just that. To meet the deadline, Citroen's people worked ten-hour days, seven days a week, for years.

Finally, on March twenty-fourth, Nineteen thirty-four, the Citroen Traction Avant [ah-vont] was introduced. Now this vehicle not only had front-wheel drive, but it was also the first production car ever with unibody construction. It also had an automatic transmission, independent front suspension and rack-and-pinion steering. It was the car of the future, and Andre Citroen sold it to the French public in Nineteen thirty-four.

The press and public loved the Traction Avant. Newspapers called it sensational; the British press said it was the car that couldn't be overturned. It cruised at sixty miles an hour and got thirty miles to the gallon - and it was the car that broke Andre Citroen.

Within seven months of the Traction Avant's introduction, Citroen was forced to sell his company due to one small creditor who hadn't been paid - he alone forced Citroen into liquidation. Michelin bought the company. The Traction Avant stayed in production until Nineteen fifty-seven.

The whole automotive industry has now copied Citroen's car. It seems that everyone benefited from Andre Citroen's desire to be the best - everyone but Citroen himself.

Story 63
Chrysler Created

Janie Fricke – Singer

It was Eighteen ninety-five and at twenty years of age, Walter Chrysler left home to work for the Chicago and Great Western Railroad in Chicago. Within thirteen years

he was the head superintendent of the line, earning twelve thousand dollars a year. In those days, a small fortune.

That same year, he attended the Nineteen oh-eight Chicago Auto Show and fell in love with the Locomobile Phaeton - a forty-three-hundred-dollar luxury car. Although Chrysler didn't know how to drive, he bought that car and took it home. There he took it apart and rebuilt it many times to see how cars were made.

His wife finally forced him to drive it. First trip out he immediately ran it into a ditch. On the second try, he got stuck in his neighbor's garden. The third time he drove, he all but buried his car in a cornfield. His wife quit insisting he drive. In Nineteen ten Chrysler moved over to the American Locomotive Company, where one of the directors, James Storrow, noticed him and his talents.

Storrow, also sat on the board at General Motors. He mentioned to Charles Nash, then head of Buick, that Chrysler would be a good fit for that young company. In Nineteen twelve Chrysler went to work for Buick - at half of what he was earning in the rail business. Under Chrysler's direction Buick was turning a large profit within months, and just a few years later Walter Chrysler was made Buick's president.

However, Chrysler and William Durant, head of GM, didn't get along. So Chrysler resigned in Nineteen twenty, a very wealthy man. Now, Chrysler would have been content just to lie around the house, but that state of affairs drove his wife crazy. She insisted he get out and get a job.

So Chrysler got out from underfoot. He went and saved Willys Overland, then moved on to Maxwell, where he introduced his first design. It was the Chrysler Phaeton, named after his first car - which was last seen stuck in a cornfield.

From the start Chryslers were known for their engineering excellence; within four years his company had become the fourth largest car company in America. In Nineteen twenty-eight Chrysler introduced Plymouth and bought Dodge, then added DeSoto.

By Nineteen thirty-five Chrysler had moved ahead of Ford, becoming America's second largest car company. Chrysler retired that year for the second time.

Today the name Chrysler lives on. This is amazing, considering that his reputation for engineering excellence is based on work he did in only the twelve-year period from Nineteen twenty-three to Nineteen thirty-five. So it's easy to imagine what an impact Walter Chrysler had on the American public in his lifetime. And just think: None of this would have happened if his wife hadn't thrown him out of the house.

Story 62
Creation of the Coffee Break

Kevin McCarthy - 570 KLIF

Most of us grew up with being told that you never buy a car that was built on a Monday or a Friday because the quality wasn't as good as those built during the middle of the week. Like most of these automotive anecdotes, this story has some basis in reality. But how could you know on what day a particular car was built?

What is important to know is that, because car production quality really did suffer during certain times of the week, almost every company and corporation in America today has coffee service.

Henry Royce was forty-one in Nineteen oh-three, and he owned an electrical equipment manufacturing shop in Manchester, England. Doing quite well, he purchased a French luxury car from London car dealer Charles Rolls. But this luxury car kept breaking down, and no matter how many times it returned to the shop, Charles Rolls couldn't keep it running. So Royce studied the designs of the world's best cars and decided to build his own.

For the next three years Royce worked on his idea: a luxury car that wouldn't leave its owners stranded. In Nineteen oh-six Royce took his homemade car to Charles Rolls and together they formed the Rolls Royce Motor Company. The next year Royce created the original Silver Shadow, so flawless a car that it sold in that design for twenty years.

Within a couple of years the Rolls Royce was considered the finest automobile in the world. Sales were brisk enough in the United States that Rolls started assembly of its cars in Springfield, Massachusetts. That's when the problems started.

The plant manager couldn't help but notice that the quality of the work being done on Mondays and Fridays - and between the hours of one and three during the day - just wasn't very good. The workers just seemed listless. Of course, they worked six days a week, ten hours a day. So the head of the factory decided that maybe coffee loaded with caffeine would perk them up. As a result, instead of stopping their work, workers found young boys carrying buckets of coffee to their individual workstations three times a day: at the start of work, at ten in the morning and at one in the afternoon. Rolls Royce car quality immediately improved. You could no longer tell on what day of the week a vehicle had been built.

The local newspaper carried the unusual story of the Roll Royce coffee breaks, and national business publications picked up its interesting production perspective. And overnight, it seemed, coffee was perking in every American company, large or small. So the next time you go to work and pour yourself some coffee, remember that it's only there because Rolls Royce found that its cars' quality was lousy on Mondays and Fridays.

Story 61
Customer Satisfaction Surveys
Chad Chase - Autobahn BMW

Do you know which car company J D Power ranks as number one in customer satisfaction? Do you know which car Power claims has the more appeal for its owners? Maybe you don't remember which cars came in at the top of Power's most recent list, but one thing is for sure: When J D Power talks, car makers listen. Not bad for a man and a company that for the first seventeen years didn't make money — in fact, the bank almost shut them down.

It was Nineteen sixty-eight and J D Power was restless. Living in LA and by all accounts having a good job with McCullough, a maker of chain saws and small engines, Power wanted more than anything else to start his own company. It would collect and analyze data for marketing research — the type of information that executives with major corporations kept demanding to help plot their futures, but never quite got around to developing on their own. As Power himself put it, "I consulted with my wife and the next day went in and quit my job." That was fairly gutsy: They had three children, a mortgage, and very little money in the bank.

However, McCullough accepted Power's resignation and became his first client. Then Ampex, which made tape recorders, came on board. Borax and Carnation offered small consulting jobs. Everything was great, with one exception; J D Power wasn't making any money.

Then in Nineteen seventy Power got Toyota as a client — a customer data-hungry client, to boot. However, Toyota only wanted Power to gather information; the company rejected Power's offer to interpret the data. Within a year Toyota accounted for ninety-five percent of Power's young firm's profits. The relationship would deteriorate, however, leaving Power heavily indebted to his bank for the expansion programs with which he was trying to deal with Toyota's accounts.

Still he persevered. Automotively speaking, Power first came to fame when he went public with the information that Mazda's rotary engines were having serious O-ring problems — before Mazda itself knew it had a problem. Still, the firm was operating at a loss.

For the balance of the seventies Power refined his survey techniques and did occasional jobs for different companies. Then in Nineteen eighty-one??? he came up with his now famous Customer Satisfaction Index Survey. Did the automakers run to Power, eager for his data? Hardly; the truth is, they ignored him.

It was January of 1981 when Power was asked to speak to General Motors executives in Southfield, Michigan. Power, never one to duck the truth, told those assembled at the meeting that according to his data, unless GM changed its ways and built better cars, by Nineteen ninety GM would lose twenty-seven percent of the American car market. The news wasn't taken well: One GM vice president jumped up in the middle of Power's speech and started yelling obscenities at him.

Then in Nineteen eighty-three, however, on Super Bowl Sunday, Subaru ran a commercial touting its cars as second only to Mercedes in Customer Satisfaction. Subaru listed J D Power's survey as its source — and the best part is that Power didn't know Subaru was going to run that ad. He found out about it watching the Super Bowl, like everyone else. Subaru had legitimized Power and his surveys, but it would be another couple of years before the car companies actually started financially subscribing to them. Even as late as Nineteen eighty-five, the Bank of America told Power it was time to close up shop and let them take their losses; his business had had seventeen years of little or no profit, and Power still owed them for many old loans.

J D Power wouldn't quit. He knew the public wanted to know the truth, and in the late eighties he finally got his firm into the black for good. One man's seventeen-year quest happened because you wanted to know what cars were the best.

Story 60
Minivans

Lee Chapman – New Car Dealers Association of Tarrant County

Today most people can't remember when the minivan wasn't an important part of our automotive society. Moreover, some debate exists on what vehicle really qualifies as America's first minivan.

It would be fair to say that Volkswagen's Transport van of the sixties was the first minivan. However, if you were asked to name the minivan that started the compact family mover craze of the last seventeen years, you'd have to give credit to Chrysler. The reality is, if Henry Ford the Second had listened to Lee Iacocca, the minivan craze would be a quarter of a century old - and Ford would have started it.

It was during the time shortly after the first energy crisis in Nineteen seventy-three that Hal Sperlich, then Ford's head engineering designer, took an idea for a compact van to Ford's President, Lee Iacocca. Now Iacocca loved Sperlich, if only for his vision of what the public would want in automobiles. After all, the two men had worked closely together on the Mustang just seven years earlier. So, Iacocca told Sperlich to keep working on the design, but he didn't tell Henry Ford.

Shortly thereafter, Sperlich finished his design work and it came time to ask Ford's permission to actually build the car. Iacocca knew the vehicle would never happen; to build the minivan Ford needed a small four-cylinder front-wheel-drive setup, and Ford didn't have one. Iacocca also knew that after the energy crisis, Henry Ford wouldn't approve the expenditure to build such a system from scratch.

So Iacocca flew to Japan and met with Soichiro (so-EETCH-do) Honda. Iacocca brought him a gift: a Ford Mustang II. Honda agreed to provide Ford with engines and transmissions for his minivan. Things looked good — only Henry Ford blew his top when Iacocca presented him with the plans. Ford not only disliked the idea of a minivan; he also told Iacocca that no Ford product would ever have a Honda engine in it.

A couple of years later Ford made his second mistake. When he fired Lee Iacocca, he allowed him to take the designs for the minivan. Big mistake. Hal Sperlich, whom Ford had personally fired a year earlier, was already at Chrysler working on the K cars. When Iacocca and Sperlich reunited at Chrysler, their plans for a minivan became the top priority.

And sure enough, four years later in Nineteen eighty-three, the Chrysler minivan arrived, this time powered by Mitsubishi. It made so much money that Chrysler could pay off all those government guaranteed loans years in advance.

And America finally said goodbye to the station wagon.

Story 59
National Park System

Mike McGuire - 93.3 Merge

What comes to mind when you think of our national parks? Is it Yellowstone, the Grand Canyon, or maybe Yosemite? How about cars? The fact is, automobiles and drivers were really responsible for our national park system.

America's first national park, Yellowstone, was set aside for the enjoyment of all Americans by an act of Congress in Eighteen seventy-two. And it was a popular vacation spot, but the people who used it were primarily those who could get away from their jobs for weeks on end. This trip took time: Visiting Yellowstone meant traveling first by rail and then by horse-drawn wagon. The average citizen had neither the time nor the money to vacation at Yellowstone.

Other national parks were added over the next three decades. Still, America had no national park system or administration to deal with the upkeep or handle the visitors coming to the parks each year. The automobile changed all of that - and led to the National Park Service's creation.

The first park to allow automobiles in was Mount Rainier National Park in Nineteen oh-eight. At the time, there weren't many cars on America's roads - in fact, there weren't many roads at all. Then Crater Lake let in motorists in Nineteen eleven, followed by Glacier in Nineteen twelve, Yosemite in Nineteen thirteen and Yellowstone in Nineteen fifteen. You see, cars were showing up more and more in the middle class. As soon as those average citizens could afford cars, they bought them - and then drove away to visit one of our national parks.

Within a year of allowing cars into Yellowstone, the park was welcoming more visitors arriving by car than by rail. Nineteen sixteen was also the year in which motorists' admission fees became the parks' single largest source of income.

Recognizing that America was going park crazy, Woodrow Wilson signed a presidential order that same year creating the National Park System. Its first director was Stephen Mather, and he believed that the future growth and preservation of the park system lay in encouraging automotive travelers to visit. Mather's plan worked and worked well. More and more Americans, as soon as they could afford cars, took off for the parks. Congress then voted money to improve the parks' user facilities. Then Washington started spending more money, buying up land to create even more

national parks.

Environmentalists may find it hard to believe, but preservationists and conservation societies even held their meetings at Auto Shows, realizing that drivers were the ones saving the parks for all future generations. In fact, it was at the Pacific Auto Show of Nineteen twenty that the Save the Redwoods League was formed, thereby saving the giant California Redwoods from the lumber companies.

Actually, Henry Ford may have led Americans to the parks. Each year he would gather friends like Thomas Edison, Harvey Firestone and naturalist John Burroughs, and together they would form a caravan of Model Ts and take off for the wilderness. The media often covered these trips in detail; and when they read about Ford's adventures, people across America decided to follow his lead.

Today environmentalists want automobiles banned from our national parks. Perhaps they don't know that these wonderful wild places probably wouldn't exist if it hadn't been for automobiles and the ordinary Americans who paid admission to drive in and marvel at them.

Story 58
Blacks Move Up In America
Clarice Tinsley – Fox Four

The early history of African Americans in this country is one of embarrassment and sorrow. Although a war was fought between the North and the South, ostensibly to free slaves, things hadn't improved much for the black members of our community economically even decades after that war's hostilities ended.

True, at the turn of the century President Theodore Roosevelt had given the job and title of Postmaster General to an African American male. For the average black family in America, however, the future held little promise of reasonable pay for honest work; for the most part, industry wanted nothing to do with our former slaves and their children. A black man named William Perry would help change all that.

Seeking to escape the South's commonly harsh treatment of blacks, William Perry had moved to Michigan after the Civil War. By chance he met Henry Ford in the late Eighteen eighties. At the time Ford, who had recently married, was attempting to clear the eighty acres of lumber that his father had given him as a wedding present. He took an immediate liking to William Perry, both respecting his intelligence, his work integrity, and loving his strong sense of humor.

Together the two men cleared every tree from those eighty acres so it could become farmland. Of course, Henry Ford didn't really want to be a farmer; within a couple of years he had migrated back into Detroit, where he took a job with the Edison Illuminating Company. From there he started the Ford Motor Company. Once Ford moved back to Detroit, however, he and William Perry lost track of one another.

Then one day in Nineteen fourteen, after Ford had built his company into America's largest corporation, William Perry came knocking on his door at the Highland Park factory. Ford was overjoyed to see his old friend, and they spent hours talking over old times. William Perry then asked Ford for a favor: He needed a job. Henry Ford, knowing what a fine worker William Perry had always been, put him on the payroll that day, hiring the Ford Motor Company's first black ever.

He wasn't Ford's only black worker for long, however; Ford then threw its doors open to all African Americans who wanted to work building automobiles. This at a time when Detroit was primarily hiring immigrants from the old country. Within six years the Ford Motor Company employed more than five thousand blacks. By Nineteen twenty-six, that number had topped ten thousand. Ford even gave orders that African Americans should be promoted to supervisory positions if they were good workers. Moreover, they were.

And because Ford employed so many blacks and because Ford promoted so many, slowly but surely, other corporations followed suit. All because one man, William Perry, cut lumber with Henry Ford back in the Eighteen eighties.

Story 57
Curved Dash Olds

Russ Martin - 97.1 The Eagle

Today most people believe that the first mass-produced car in America was the Ford Model T. In fact, however, that honor goes to Ransom Olds' Curved Dash Oldsmobile. Amazingly, that vehicle only happened because of an act of God.

Ransom Olds went to work for his father in the family's machine shop when he was twenty-one. His specialty was the gas-powered motor. In the late Eighteen eighties Olds had been reading about Carl Benz and Gottlieb Daimler's automobiles, imagining them flying over the German countryside; and he decided to take a shot at making an American version. Within a year Olds had designed and built his first automobile.

And, although he was quite familiar with gas powered engines, Ransom Olds chose to use steam to propel his first car.

That vehicle was written up in "Scientific American," and Olds subsequently sold it to a pharmaceutical firm in Bombay, India. That particular vehicle goes into the record books twice: the first American car ever sold and the first American auto export.

Olds started the Olds Motor Vehicle Company in Eighteen ninety-seven. He soon ran out of money and was forced to ask a group of Detroit businessmen to inject capital. They agreed to do so on the condition that Olds move his plant from Lansing to Detroit.

Olds spent the next two years in the new location on Detroit's Jefferson Avenue working on different models of automobiles. He built a large sedan, an electric car and a small runabout, but couldn't quite determine which one would be the easiest to produce or sell.

In early Nineteen oh-one, his power of decision went away. A fire swept through the Olds factory and destroyed all but one hope: The only thing left standing was a small runabout, its sweeping curved dash a daring departure from other cars' severe lines. Fate had intervened and the six hundred fifty-dollar Curved Dash Olds was put into production. The first year sales hit four hundred twenty-five vehicles, then a record.

Later that year Roy Chapin, Olds' 21-year-old mechanic, drove one to the New York Auto Show. The show officials refused to admit the car. But one New York dealer, hearing about a record drive in an Oldsmobile, went to Chapin's hotel and bought a thousand of the cars on the spot. That made the Curved Dash Olds America's first high-volume car. You're probably too young to remember the popular song written about this beloved car: "In My Merry Oldsmobile."

But Ransom Olds couldn't get along with his partners, and he left his company in Nineteen oh-four. From there he did design work on diesel engines, started the REO Truck Company, and then created his most durable invention, one we still use today: the gas-powered lawn mower.

His one enormously popular car's success, however, had inspired everyone else in the automobile industry. They now believed that they too could create cars that the public would make runaway hits. One man who envied and later capped the success of the Curved Dash Oldsmobile? Henry Ford, with the Model T.

Story 56
GM Creates the Modern American Corporation
Rebecca Miller – NBC Five

Henry Ford may have created our modern economic society with the moving assembly line, but it was Alfred Sloan of General Motors who created the modern corporation. At a time when Ford was losing millions of dollars while selling millions of cars, GM under Sloan was becoming the wealthiest company in the world - and creating a caste system for automobiles.

Alfred Sloan was born in New Haven, Connecticut, in the Eighteen seventies; his father had a wholesale importing company. At twenty years old, he moved with his family to Brooklyn, where he picked up an accent that he never quite managed to lose.

Sloan graduated from MIT and went to work for the Hyatt Roller Bearing Company, starting as a draftsman. However, his bosses at Hyatt noticed Sloan's incredible organizational skills; within a couple of years, he was the firm's business manager.

Moreover, that move happened right before the automobile industry took off and took Hyatt Roller Bearing with it. Under Sloan's watch Hyatt became the number one supplier of ball bearings to the motor industry. Quality was flawless and delivery always punctual. So General Motors decided they needed Hyatt as an in-house company and bought the firm in Nineteen sixteen.

Two years later Alfred Sloan became a GM vice president. But it was during the turbulent years right after the Nineteen twenty-one recession that GM fully realized Sloan's genius. In Nineteen twenty-three Sloan was made president of the company, and his job was to untangle the far-flung mess that was GM's operations.

Sloan did just that: He closed down all of GM's unprofitable companies, with the exception of those industries that had long-term potential. Frigidaire was one company Sloan kept. What GM had left were Chevrolet, Olds, Pontiac, Buick and Cadillac. They also kept important parts groups such as Delco and Champion.

Sloan then created the modern centralized corporation. That is one in which each division acts on its own and stands on its own profit and loss statement, but with the head of the individual groups reporting to the fourteenth floor at GM.

Sloan also hired Harley Earl to create more exciting automobiles and separate the

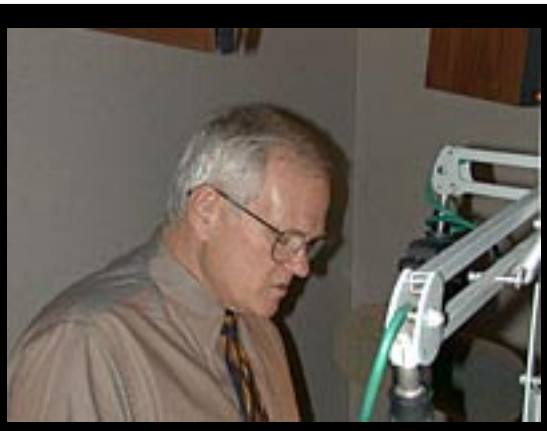
identities of GM's five car divisions - a car for each purse and purpose, as it were. Every major company in the world copied the success of GM as a corporation under Sloan. It was a corporate dynasty that would last for a half century.

For the past twenty years GM has tried to undo all of Sloan's work by centralizing all decision-making. The result is that GM has the same reputation today - for selling the exact same cars in all their divisions - that they did in the early twenties. More than that, because all the decisions are made for each division at the top of the firm, a bad decision affects all five car companies. In the past, only the division that made the mistake suffered.

If Alfred Sloan were alive today, could he turn GM around again as he did in the twenties? Sure: after all, Sloan was America's organizational genius.

Story 55
Charles Kettering

Byron Harris – Channel Eight



Ask anyone who America's most important inventor was and for the most part, you'll hear Thomas Edison. While Edison did give us the light bulb, the movies and the phonograph, in terms of inventions that we use every day, Charles Kettering puts Edison to shame.

Like Edison, Kettering didn't invent everything he gets credit for. Many brilliant designs that came out of his Delco Laboratories were the work of other scientists employed by Boss Kett, as his fellow workers called him. Still, Kettering set the agenda and often helped work out the problems of creation with his other scientists.

Charles Kettering was born in Ohio with an engineering-oriented mind. He had problems as a student, however, because he had severe vision problems. Often he would drop out of school and take a job as a lineman for the local telephone company until his eyesight improved enough that he could read the mathematical problems he loved so much.

Among the things that Kettering invented for everyone's benefit was the electric cash register for NCR. Boss Kett then took that machine's principles and invented the electric starter for automobiles in Nineteen eleven. It's interesting that the first person to ride in one of Kettering's self-starters was Thomas Watson, a former colleague from NCR. Watson was so impressed with Kettering's technology that he branched

out and started his own firm to further that industry: IBM.

General Motors bought Delco Laboratories in Nineteen twenty, and that move brought Kettering and his group inside GM. Within a couple of years Kettering and his boys invented fast-drying paints for cars, which spelled the end of Ford's original assembly-line color choice, which was "any color as long as it's black."

Freon, the perfection of the refrigerator, high-octane gasoline, high-compression engines, hybrid electric diesel engines for trains, which still power them today, hydraulic lifters and harmonic balancers to make smoother engines: These were just a few of the many inventions that Boss Kett and his crew gave us.

He also invented chrome, which we used a little too much in the fifties, and Charles Kettering also did the first scientific study of smog - long before our government or the public even knew it was a problem.

By the time he retired from GM, Charles Kettering held more patents for his inventions that any other inventor in American history before or since. He was also the richest inventor America had ever produced.

If you look around your house, car or office, you will still see the inventions of Charles Kettering. From your air conditioners to your refrigerators to goods hauled across country by train. Yet most people aren't aware of the work this man did, for quite often Delco would invent something and then be forced to give up its patents to DuPont for manufacturing. Quick-drying paint and freon were two ideas transferred from GM to DuPont. As it happened, Pierre DuPont was GM's largest stockholder at the time.

Still Kettering and his boys made life better for the rest of us, with both cars and other inventions. Though he's been forgotten for the most part today, he remains America's top inventor to date.

Story 54
Muscle Cars

Angie Richardson- Editor

If you grew up in the sixties with a Y chromosome, you knew what you wanted in life: A Pontiac GTO, or a Shelby Cobra, or the baddest of them all, a Dodge 440 Magnum.

They were three of a breed of cars famous for having far more horsepower than their suspension or brakes could possibly handle. Humans built like this we call over-muscled; in the automotive industry they roared to fame as "muscle cars."

Muscle cars weren't created in the sixties. For decades kids had been souping up old jalopies into street rods. Remember the drag race in the movie American Graffiti between Harrison Ford and Paul LeMat?

Of course high-compression, large displacement V-8s were a staple of cars in the fifties. Those monster engines were not for racing, of course. No, they were needed run new devices - power steering, air conditioning, power brakes - and still have plenty of acceleration power to spare.

Detroit's car companies sponsored their vehicles in races across America until 1962. That's when Detroit shut down its racing teams, caving to growing public pressure - and press - from automotive safety advocates. Automakers weren't thinking about losing repeat customers to flaming drag-racing deaths. Even more realistically, they were terrified of getting bad press.

General Motors even limited maximum displacement sizes in their various car lines' engines. The word was out; excessive power in automobiles would no longer be tolerated. The GM rulebook actually mandated no less than 10 pounds of vehicle weight per cubic inch of engine. Leave it to the bad boy of General Motors, John DeLorean, to break all the rules.

It was spring of Nineteen sixty-three, just a couple of months after GM banned big engines in small cars. Pontiac's head engineer, John DeLorean, along with Bill Collins and Russ Gee, were testing the upcoming Nineteen sixty-four Tempest coupe. It had a three hundred twenty-six cubic inch engine in it, but Collins had noticed that its engine mounts could handle GM's larger three hundred eighty-nine cubic inch engine. So the Pontiac bad boys put one in. It was a screamer. But it weighed thirty-five hundred pounds: the Tempest, by GM's rules, couldn't use an engine that big.

By now, however, the rulebook had long since been thrown away. For DeLorean had found a way around them: He made the larger engine in the Tempest not standard equipment for the lightweight car, but an option package called the GTO.

DeLorean then had to sell his boss at Pontiac, Pete Estes, to let him break GM's big-engines rule. So he proposed making the GTO a limited-edition option, allowing only five thousand total units. Possibly thinking, "It's better to ask forgiveness than permission," DeLorean also said that the dealers would buy those five thousand immediately, before the General Motors brass even knew they were available.

A skeptical Estes agreed under the circumstances that DeLorean could build exactly five thousand GTOs, but no more. He also bet DeLorean that he wouldn't sell five hundred, and covered his bet by not putting the GTO in the Nineteen sixty-four Pontiac brochures. He lost anyway. Pontiac dealers ordered five thousand GTOs within days, even with sluggish initial retail sales. Then Car and Driver reviewed the

GTO - and suddenly Pontiac couldn't build enough.

That's how the fourteenth Floor at GM found out that DeLorean had blatantly flouted company rules. Then GM's accountants told the executives how much they were making on each GTO - of which, by the way, they couldn't build enough - and all was instantly forgiven. Now every car company tried to out-power the others. The sixties muscle car era had been born, thanks to one guy who just never liked GM's rules.

Oh, and those five thousand GTO's that DeLorean promised he would keep production to, it ended up over 32,000 sales for the year.

Story 53
Window Stickers
-The Moroney Law
Babe Laufenberg - Channel 11

Today most people are still leery of automobile dealers, even though, for the most part, they've never gone through anything as bad as the horror stories they've heard about other dealers left over from the fifties.

As it turns out, we've always had a basic mistrust of people who sell transportation to the masses - all the way back to the days when we depended on horses to get around. That's why people sometimes still refer to buying a car as horse-trading; in its time, that was actually a derogatory statement.

However, most stories you hear today about automobile dealers are the result of the public's treatment at their hands in the fifteen-year period following the Second World War. That treatment first came about because of the fact that Detroit didn't build cars at all from early Nineteen forty-two to the end of the conflict. That situation created an incredible backlog of consumers looking buy new automobiles — and trade off their Nineteen thirties models. Add into that mix that it took Detroit almost a year to get production back up to pre-War levels, and that the new, post-War designs for automobiles didn't start appearing until Nineteen forty-seven. We should also point out that millions of GIs had money in their pockets - and the first thing they wanted when they got back home from Europe and the Pacific was a new set of wheels.
Needless to say, it was a seller's market: a good time to be a car dealer. Not only because of the reasons you just heard, but also because there was no such thing as a window sticker. Cars could be sold for whatever the market would bear.

Then in Nineteen fifty-four, a Tulsa Cadillac-Oldsmobile dealer, Mac McCullough,

felt that this system wasn't doing the public justice. McCullough complained to Oklahoma Senator Mike Moroney, a former newspaper reporter, and the Senator asked the Interstate Commerce Commission to investigate new-car pricing in America.

Forty thousand surveys were sent out to new-car dealers across America, asking about how they handled car transactions and the amounts buyers paid for vehicles. Twenty-four thousand replies later, Mike Moroney agreed with McCullough's concerns.

A bill was introduced in Congress mandating window stickers with suggested retail prices; it was signed into law on July seventh, Nineteen fifty-eight. The Nineteen fifty-nine model year automobiles were the first to have window stickers, or Moroneys labels as they are called, on them. Trucks, now fifty percent of all new vehicles sold in America, weren't required to have window stickers until the late eighties.

Today Mac McCullough, the car dealer who forced window stickers on his peers, no longer believes that they are fair. The reason? Because manufacturers have been squeezing dealers' margins for the past twenty-five years, making it ever more difficult for a new car dealer to make money actually selling new cars. Believe it or not, some models of cars sold in America, even at full list price, won't return a dealer's cost of doing business today.

Story 52
Feds Bail Chrysler

Gloria Campos – Channel Eight

Chrysler had been failing since Nineteen fifty-three, although most people didn't realize it. The first problem Chrysler had was its rep: For decades Chrysler had been known for brilliant, innovative engineering. But by the early fifties their competitive edge against GM and Ford dwindled - so Chrysler's engineering no longer commanded premium prices.

Instead, the fifties and sixties were driven by styling: Chrysler's weakest point. For the first time since the early thirties, Chrysler was operating at a serious deficit.

Second problem: The government started leaning on Chrysler to provide engineers for our Redstone Missile program. So just when Chrysler needed its best engineers, they were off in Alabama trying to get the U.S. into space.

Chrysler had hired a consulting group McKinsey and Company for tactical and

strategic planning advice for the future. They suggested Chrysler decentralize decision-making and buy foreign car companies. Of course, GM and Ford had gotten there first, leaving Chrysler buying into Simca and British carmaker Rootes - neither one even a reasonable investment, much less a source of growth.

The recession of Nineteen fifty-eight nearly wiped Chrysler out, production was cut in half. Even with a small resurgence over the next two years, Chrysler had to fire twenty-five percent of its white-collar work force in Nineteen sixty-one.

At the same time, Chrysler installed Lynn Townsend as president. Even with only four years' experience in the car business, Townsend looked like a genius at first, trimming costs, making money. But like most accountants running car companies, he forgot to design and manufacture cars people really wanted to buy.

By early Nineteen sixty-nine, Chrysler was sitting on four hundred thousand cars that dealers wouldn't take. The seventies were even worse - its only real hit was the Cordoba, and it had quality problems - though not as bad as the later Aspen and Volare did. Chrysler was dying: They were almost five billion in debt, and couldn't afford to engineer the cleaner, more fuel-efficient engines required by federal law.

However, Chrysler did hire Lee Iacocca when Ford fired him. And Congress liked Lee. When Iacocca went asking for federal loan guarantees to save the company, he didn't blame Chrysler's failure on a quarter of a century of bad management decisions. Instead, he blamed the high cost of complying with all the federal laws governing automobile manufacturing. Then Iacocca explained that if Chrysler failed, it would cost the nation more in unemployment benefits than it would to pay off the loans.

The pitch worked. Late in the day on December twentieth, Nineteen seventy-nine, Congress co-signed the loans and gave Chrysler one more chance. I'm sure the people at Daimler who have bought the company are glad they did.

Story 51
The Volkswagen Beetle
Neal Hancock -Hiley VW

The real story of the Volkswagen Beetle is far more complex than anyone could imagine. Moreover, there are three people at the center of the story and even today, most people can't decide who was the real father of the Volkswagen Beetle.

The Volkswagen Beetle was conceived in Nineteen twenty-three. That year, a young

Adolph Hitler had been imprisoned for his radical speeches; while jailed, Hitler read Henry Ford's biography. Hitler felt that having an automobile industry in Germany that catered to the common man would have the same effect economically for his country that the Model T had had for America.

That same year Ferdinand Porsche, already a renowned car and engine designer, was standing in front of the board of directors of the Austro Daimler car company. Porsche was asking for permission to design and build a "People's Car." His concept was the same as Hitler's, a German version of the Model T. However, Daimler's board believed there was no money to be made in small
cars. So they told Porsche, in no uncertain terms, that he was not to do any work whatsoever on designing a small car for the masses. An angry Porsche, who had been playing with a spark plug in his hand, threw it and beaned one of the board members right in the middle of the forehead. For that response, Porsche was fired.

A Czechoslovakian car company, Tatra, made the real Volkswagen Beetle. Hans Ledwinka, who was an automotive genius on the same level with Dr. Porsche, designed it. The small car he created was the Tatra V-570. A small air-cooled rear-engined automobile, it looked exactly like, you guessed
it, a Volkswagen Beetle. Only it was on the market and being sold in the early thirties.

That small Tatra was displayed at the Berlin Auto Show the year after Hitler came to power. Now Hitler at the time drove in Tatra limousines. It wasn't until long after he was Chancellor of Germany that he switched to Mercedes. During that same auto show, Hitler met Ledwinka and told him how impressed he was with the V-570. He asked Ledwinka for the working schematics for the car, and Ledwinka provided them. Hitler, in turn, gave those designs to Porsche, who started working on the Volkswagen Beetle.

Now, Porsche did make changes to the car. He used his own independent suspension and installed a boxer engine he'd designed during the First World War for aircraft. But, make no mistake about it, today the Tatra V-570 is consigned to automotive trivia books and the Volkswagen Beetle went on to sell untold millions of cars. Even today, the new Beetle still
holds a place in most everyone's heart. Not bad for a stolen design.

Story 50
'50's Automobile Styling

Terry Box – Dallas Morning News

Maybe it was just our parents' form of denial that there had ever been a time called the Great Depression. Whatever it was, in the fifties they loved cars that today can best be described as ——outlandish. And more than anything, those cars remain a perfect symbol of that era.

General Motors led the automotive excesses of the fifties, and they germinated in the brain of its in-house genius, Harley Earl. Earl started the fifties design look during the Second World War when his friend Kelly Johnson invited him out to Lockheed. Earl caught a glimpse of Lockheed's upcoming P-38 Lightning fighter, and he fell in love with its dangerous look. He especially loved the fighter's raked vertical stabilizers - those tails that look like shark fins.

Because there was a war going on Earl didn't do much of anything about those tail fins, at least with his automotive design team. After the war, however, Earl went to work designing the tail-fin look into everything GM built. The only problem was that when the GM brass saw the new cars with those fins, they hated them. General Motors ordered Harley Earl to take those damn fins off everything.

The problem with that command was that the tooling and dies had already been ordered for the Nineteen forty-eight Cadillacs - Cadillacs that would proudly sport the first tail fins. It was too late to stop the production run of those cars and so Cadillac got its fins.

When the dealers first received those cars, they called GM by the hundreds and complained that their customers hated the tail fins. Within a month or so, however, those same Caddies were selling in record numbers. A new style had been created. Now General Motors switched positions and gave Harley Earl carte blanche to design fins onto whatever he wanted.

Over at Buick, Ned Nickles had cut holes in his personal car's front fenders and added randomly firing amber lights. He wanted something that simulated the exhaust firing of World War Two fighters. Someone of power at GM saw Nickles' car and voila, the Buick Ventiports were created - minus the fighter exhaust flashing lights.

Harley Earl wanted his cars to resemble modern jet aircraft in other ways besides tail fins, so his designs began to incorporate chrome — lots of chrome. That's right, the whole fifties look of automobiles happened because Detroit's head designers wanted cars to be thought of as ground-flying jets. Both Ford and Chrysler were forced to follow GM's over-the-top designs.

But just as the fifties were about to give way to the sixties, Harley Earl found himself without new ideas for design. While Earl wanted to go even farther out on the aircraft design limb, his twelve hundred young designers craved something different.

Word on the street in Detroit was that Chrysler was coming out with a smoother, cleaner, lower look for its Nineteen fifty-seven models. While Earl was on vacation, his kids secretly went and sneaked a peek at the new Chrysler cars. The new designs they saw blew them away.

They immediately went back to work, tore up the designs they were working on and started designing the cars that would end up as the Nineteen sixty Chevys. Gone were the tail fins, the chrome and the goofiness of the Nineteen fifties' designs. When Earl returned, he had nothing to say. Maybe he knew he'd run out of fresh ideas.

Harley Earl retired from GM on December first, Nineteen fifty-eight. Moreover, the outlandish fifties automobile designs were retired with him. In its place was the start of the Sixties Look for automobiles - a look designers are trying to recreate today.

Story 49
Datsun's 240 Z

Billy Hayes -570 KLIF

Try to think of the first time that you seriously considered buying a Japanese car - or even considered it acceptable to be seen in one of their vehicles. Today we take Japanese automobiles and trucks for granted as being reliable or even stylish, but though the Nineteen sixties Detroit ruled. Then came the Datsun Two-forty-Z.

Datsun had come to America in the late fifties, without finding much success. Its cars were severely under-powered and frankly didn't work all that well - at least not for the length of time that most people drove their automobiles.

What kept Datsun alive was the irrepressible Yutaka Katayama. Better known as Mr. K, the man was sent to America as punishment by Nissan of Japan, in hopes that he would quit the company. Instead Mr. K fell in love with America and was determined to make Datsun successful here.

In the early sixties Nissan was losing a small fortune selling vehicles in the U.S. About the only thing selling at all was its small pickup truck, the Patrol. Frankly, the reason that Nissans were originally called Datsuns in America is that the parent firm in Japan was sure they would fail in America, and they didn't want to bring shame to the company name of Nissan if they withdrew from the U.S. Still by early Nineteen sixty-three Nissan was ready to call it quits. What saved the company and gave the Japanese car companies their beachhead here in America was none other than Roy Rogers, king of the cowboys.

Mr. K had heard that Rogers had bought one of his pickup trucks and loved it. So he drove out to Roy's ranch in Victorville, California, and asked Roy Rogers if he would

do commercials for Datsun. Of course Mr. K had no money to pay Rogers with; instead he offered him the use of a free truck. Amazingly, Rogers agreed.

Once Roy Rogers appeared in Datsun truck commercials, sales took off. Nissan of Japan decided to send more vehicles to America and make a larger financial commitment. Sales in America continued to improve, but Mr. K told his superiors that they needed to design and build a car that would appeal to the youth of the country. A runaway hit, if you will. Mr. K. correctly figured that younger people wouldn't have the prejudices toward buying a Japanese car that the older car-buying crowd would have.

What Nissan designed was the Two-forty-Z, although its real name in Japan was the Fairlady. It was, of course, a knockoff of Ford's spectacular fastback Mustang of Nineteen sixty-six. Mr. K warned his superiors in Japan that the name "Fairlady" wouldn't go over with the American kids. They ignored him.

When the first Two-forty-Zs arrived in America in early Nineteen seventy, Mr. K went down to the Los Angeles ship harbor and was horrified to find "Fairlady" badges on the fenders of Datsun's hip new sports car. Out of his own pocket Mr. K made emblems that said Two-forty-Z; and he and his men pried off the Fairlady nameplates and replaced them with the Two-forty-Z badges.

Back in Japan Mr. K's superiors were puzzled: The American automobile magazines were calling the Fairlady a Two-forty-Z. How, they wondered, had the Americans learned the vehicle's internal company code? They really didn't care — a runaway hit, the Two-forty-Z put Japanese cars over the top in America.

For the first time, it was hip to own one. More than that, owners of the Two-forties told everyone they knew how great the quality was. Two-forty-Zs were found in the best neighborhoods. From that day on, you were no longer slumming if you drove a Japanese car.

Story 48
Economic Impact on Society
Dunham & Miller - 1310 Ticket

The automobile's economic impact on society isn't always apparent.

From the start the automobile was slow to create any real wealth for anyone. Even

when the original Model T came out and sold like gangbusters, most of America's one thousand car companies had yet to make any real profit or failed quickly. It was really Ford's wealth from the Model T, and his subsequently giving his employees a five-dollar workday, that created the first American middle class from common laborers.

However, after the Second World War the automobile industry changed society. Consider this: What you do most often is use your car to drive to work and make money, then drive to the store and spend it, right? Therefore even in your world your automobile is the fundamental lifeline to our economic system. But, did you know that eleven percent of the working public in this country have jobs simply because the automobile exists?

After all, how many people on highway construction crews would get paid if we didn't all have cars? Or the companies that make road signs? How about every person working in a drive-in restaurant, which also wouldn't exist without cars? Then add insurance agents, car salespeople, claims adjusters and gas station attendants - and let's not forget all the people who own car washes, oil change centers, or garages.

Now did you know we that the automobile industry is the number one buyer of both steel and glass in America? How about all the oil companies, from their wildcatters to petroleum engineers to the people who build their gas stations? We don't even need that industry without cars.

That brings up the tire industry, from those who design them right down to your local NTB tire store. Oh, and battery companies, too. Also radio and electronics firms. Now you can move down to the second tier, which is more indirect, with groups like advertising agencies. Close to twenty percent of them would fold if car companies didn't spend so much to sell cars. What's more, TV networks would be forced to cut back on programming if billions of automotive advertising dollars didn't come through their doors every year. Forget TV, how about radio?

Look around you: How many companies wouldn't be in business if it weren't for Americans' driving habits? Furthermore, in most states, the sales of automobiles is the number one generator of taxes, which then keeps our government open. Wait a minute, that's not so good.

One other impact on society is so great that we can't put a dollar amount on it: Every day we hear how automobiles are killing Americans, but no one ever reports on how many lives they've saved. Before the automobile children were born at home. After the car people seemed to make it to the hospital even at three in the morning. Doctors likewise could quickly respond to a medical crisis, thereby saving lives they would have lost if they were still driving buggies.

More children being born healthy in America dropped our infant mortality death rate, and therefore raised the average life expectancy of all Americans. That's right, because of cars, we all live longer. No matter what you may read anywhere else.

Story 47
Corporate Average Fuel Economy Law

Rene Isip & Tom Tyrell
Lute Riley Honda

The first energy crisis, in Nineteen seventy-three, was a wake-up call for America. With the exception of gas rationing during the second world war, Americans had never thought about the day when gas might not be available, or even worse, might not be
as inexpensive as it was.

In Nineteen seventy-three the average American family made just shy of thirteen thousand dollars a year. An Oldsmobile Eighty-eight Royale Sedan could be bought for less than fifty-five hundred dollars. And even though that car got only eight miles to the gallon in town, the average driver put only twelve thousand miles a year on his or her car. And with gas selling for twenty-nine cents a gallon, fuel cost the average American around four hundred and thirty five dollars a year.

After the energy crisis of Nineteen seventy-three, the car cost the same and got the same mileage per gallon. But the higher price of gasoline meant that a family was now paying out three times as much for gas — thirteen hundred dollars a year, or close to ten percent of its annual income. The government knew that something had to give.

So, in Nineteen seventy-six the government started imposing the Corporate Average Fuel Economy Standards for automobiles and trucks. The program had little real impact at first. Not because Detroit wasn't trying to improve the automobile's gas mileage, but because the American public had gone right back to buying what it wanted: big V-8 engines. As recently as Nineteen seventy-five, Oldsmobile was still conceding to customer demands, by offering the four-hundred-fifty-five-cubic-inch V-8 in the mid-sized Olds Cutlass.

While the standards for fuel efficiency were regularly raised, the second energy crisis in Nineteen seventy-nine actually convinced the public that small was beautiful, at least when it came to fuel-efficiency in automobiles. By the early eighties retailers were finding it increasingly easy to meet the government's mandated fuel efficiency figures. However, it was in Nineteen eighty-five that the nation's new car fleet hit its highest average fuel economy. That was just two years after the end of the last energy crisis, when we still remembered its economic devastation. But from there on, fuel economy went right back downhill.

First, people moved right back into cars with larger V-8 engines. Then by the early nineties the truck and sport utility craze had started. Today Congress is again debating whether or not to raise the Corporate Average Fuel Economy figures for our national automotive fleet. Not that it would make any difference - for the last fifteen years we've ignored it anyway, in our rush to buy the biggest and most powerful vehicle we can get our hands on. This, in spite of the fact that we know exactly what terrible gas mileage we're getting.

Bending the rules to evade paying huge fines for not meeting the standards - that's why car companies sometimes bring out new truck models a year in advance of the model year designation they carry. That's also why the Nineteen ninety-eight model Suburban was only sold for five months. However, the Corporate Average Fuel Economy Rule program is the only one left over from when the Arabs embargoed the oil back in Nineteen seventy-three.

And you still don't feel guilty about driving that big sport utility, do you?

Story 46
Detroit -WWI

Mike Synder - NBC Five

The First World War. It really was the war to end all wars. Long before man thought to start numbering their international battles and conflicts, it was simply known as- the Great War.

Americans don't by nature like war. More accurately, before every international conflict we've ever been in, Americans have been known to be isolationists. Of course, once committed to action, we've fought with the deep personal conviction that we must win in order to preserve society as we know it. Maybe that's why we win so many wars.

Henry Ford may have personified the spirit of America before and during the First World War. A lifelong pacifist; Ford spent a fortune trying to end the conflict before America even entered it. Ford even told the media that he would burn down his factory before he would allow it to be used for war production.

But in spite of Ford's rhetoric, the Navy asked him to design and build one hundred twelve submarine chasers in Nineteen seventeen, the boat to be dubbed the Eagle.

Ford, thinking he could use this opportunity to build a new factory near the Rogue River and get it financed by Uncle Sam, agreed to do so. However, by the end of the war two years later Ford production system hadn't translated as well as it should have to military production and Ford had only managed to build seven of these boats. And not one of them was seaworthy.

This would be a continuing problem for the government during the war. Detroit was already the most powerful industrial base in America, but automakers hadn't developed enough as an industry to handle all the unique requests the military was making. More than that, the war only lasted eighteen months after we entered the it, certainly not enough time for Detroit to adapt to making the new military machines the government wanted.

Still, Packard gave up the patent rights for its V-12 engine; twenty thousand of these, built by Ford and GM, were used in aircraft overseas. Detroit also turned out sixty-two thousand trucks and millions of rifles. Detroit also saved tens of thousands of soldiers by producing ambulances to carry the wounded from the front lines to medical care stations. Walt Disney was an ambulance drive in the war.
Now, not everyone pitched in on the war effort. William Durant, who was then head of General Motors refused to convert to military production. This in spite of the fact that Henry Leland, Cadillac's president, demanded he do so. Durant actually ended up firing Leland over the issue. Leland, in turn, then created Lincoln. Apparently the only luxury car company founded because of debates over helping the military.

So, did Detroit play an essential role in the Allied victory? Yes, but not necessarily because of the amount of goods automakers produced. It was more because the enemy believed that Detroit was producing more than it actually was, and feared that production would step up even further until the Allies would overwhelm them completely. In reality, it would be another twenty-three years before Detroit became sophisticated enough to create weapons of mass destruction quickly. But when that happened, it turned the tide of
the Second World War.

And by the way, only the Dodge Brothers built material for the Army without taking a penny of wartime government profits.

Story 45
Air Bags

Tim Ryan -Fox Four News

Today the American public screams for safer cars. Moreover, the first thing the public equates with safety is air bags, the more of them, the better. What most people don't know is that air bags came about because of some poorly engineered Navy torpedoes from the Second World War.

John Hetrick was an engineering technician working on military bases in Pennsylvania in early Nineteen fifty-two. One day while out driving inhis Nineteen forty-eight Chrysler Windsor with his wife and seven-year-old daughter, he crested a hill and almost ran into a small boulder that had fallen onto the highway. Hetrick and his wife raised their arms, trying to prevent their daughter from hitting the dash, as he stood on the brake, veered off the road and slammed into the ditch. Fortunately, no one was hurt.

Nevertheless, Hetrick realized how close his family had come to disaster that day and that night he sat down at his dinner table and started sketching. His idea was for some type of inflatable device could come out of an automobile's dashboard in the event of an accident. Suddenly, Hetrick remembered some faulty World War Two torpedoes he had encountered during that conflict. In those torpedoes, the compressed air tanks often ruptured during transportation; when that happened the torpedos protective canvas covering would shoot across the room in the blink of an eye. Hetrick realized he could use the same principle of releasing compressed air at the moment of an automobile's impact that could inflate a canvas bag, which would in turn keep the car's occupants from hitting its metal dashboard and glass windshield.

Hetrick applied for and received a U.S. patent for his "safety cushion assembly for automotive vehicles" in Nineteen fifty-three. David Peter Hass of Eaton Corporation took it from there with other work in the early sixties. Hass was familiar with the idea having written about it in his master's thesis in Nineteen fifty-five, at the Chrysler Institute of Engineering. General Motors and Ford also worked on inflatable systems in the late fifties and sixties, but nothing worked properly on these test air bags.

Up until that time, Detroit had never realized just how fast collisions happen or how quickly the energy of an impact is transferred inside the automobile. Now Detroit knew that for an air bag to work it would have to inflate in just forty milliseconds. But, the civilian automotive world didn't have a triggering device that precise. The Army, however, came to the rescue in Nineteen sixty-six, successfully testing just such a triggering device at the White Sands Proving Grounds. And the military gladly let Detroit use it.

It would take another eight years of research before GM finally sold air bags to the public in Nineteen seventy-four. Or rather, attempted to sell them: No one was buying. Ford, who had wanted to offer air bags five years earlier, had changed its mind after tests showed that its safety systems could actually kill small women and children.

So, for the next two decades, in between political fights on the subject, Detroit worked on perfecting the modern air bag. However, it was Mercedes who actually reintroduced them in Nineteen eighty-four. The Germans also gave the air bag its permanent tag: supplemental restraint system.

It was left to Lee Iacocca, who finally sold America on automobile air bags, in Nineteen eighty-eight. Today, the public demands them.

And just think: This all happened because during the Second World War, American torpedoes were so poorly made that many of their compressed air tanks ruptured in transport and gave John Hetrick an idea of how to save lives.

Story 44
Ford Mustang

Steve Smith -Car & Driver

When you talk about magical automobiles that changed the buying habits of Americans, you really can narrow it down to two cars: The original Ford Model T and the Ford Mustang. The only difference between the two is that the Mustang was an immediate hit with the market.

The real grandfather of the Ford Mustang is the Volkswagen Beetle. Why? Because its success in the fifties caused Ed Cole, then head engineer of Chevrolet, to create the Corvair to do battle with it. That car was introduced in late Nineteen fifty-nine; and within a year, to help bolster sales, Chevrolet introduced the Monza. A sportier version of the Corvair, the Monza had bucket seats and a stick shifter on the floor. Kids and young adults bought Monzas in record numbers.

Sitting in his office over at Ford, Lee Iacocca knew his company needed a car to offset the success of the Monza. The only problem was that Henry Ford wasn't likely to approve the money to create a brand new inexpensive car from scratch. It was the early sixties, and the Ford Motor Company was still reeling from the failure of the Edsel.

Iacocca believed that the prettiest car Ford had ever built was the Nineteen fifty-five Thunderbird, but he knew two-seaters wouldn't sell. So he told his design group to create a car that looked like a coupe but held four adults. He then choose the lowly Falcon chassis as the basis for the car's underpinnings.

In the spring of Nineteen sixty-two, Iacocca took Henry Ford down to the design studios to look at his new car. Ford didn't say a word, and he left immediately.

Iacocca thought Ford was furious with him for designing the car in secret. In reality, Ford had developed mononucleosis and was about to throw up. Ford spent the next six weeks in bed.

When Ford recovered he again looked at the car and okayed the project, although he did tell Iacocca that if the car failed in the market, it would be his job. On April sixteenth, Nineteen sixty-five, the Ford Motor Company bought a solid block of ads, promoting their new car from nine-thirty to ten on all three television networks.

The next day people across America flooded into Ford dealerships. Twenty-two thousand Mustangs were sold the first day. In each of the next four months, twenty-five thousand Mustangs were sold at retail. The next year another four hundred seventeen thousand Americans bought Mustangs.

Moreover, the Mustang changed our car-buying habits. It was the first car that single women bought in record numbers. It was the car that defined the automotive tastes of the seventy-eight million baby boomers just coming of age. It changed car design habits, too: Every car company in the world today is still trying to come up with a car that would make as big a hit as the Mustang did back in Nineteen sixty-four.

Story 43
Model T

Charles Bankston –Village Ford

Like so many important stories about the history of the automobile industry, the creation of Ford's Model T is surrounded in myth. You see, it wasn't Henry Ford who came up with the idea of a "car for the masses," nor was the Model T Ford's first inexpensive car.

So, to better understand how the Tin Lizzie came to hold the title of the "car that put America on wheels," let's look first at the man who did first say he would build a car for the masses: Thomas Edison.

Edison is still known as America's great inventor, but in his lifetime, regardless of the number of his inventions that we still use today, Edison was a horrible businessman. Worse yet, in many cases he actually stole from other people in order to make a fast buck. But Edison was also Henry Ford's idol, and Ford stole Edison's best idea.

In Nineteen oh-four, believing that he could make more money by building cars,

Edison started crisscrossing the country, telling the media wherever he went that everyone could afford the electric car that he would soon sell — at only four hundred dollars. Edison was often quoted as saying that he would build - you guessed it - a car for the masses. But Edison couldn't get the money to start car production, and his idea faded away.

Henry Ford, on the other hand, realized the brilliance of Edison's concept. So, while Edison was out traveling, promoting his idea, Ford was building his Model C, with a base price of eight hundred dollars plus options — and beginning to work out a car he could build for only four hundred dollars. Two years later, Ford announced that his company would soon have a car ready that would sell for only four hundred fifty dollars - the Model N. The announcement was premature — when finished, it also listed for nearly eight hundred. Discouraged but undaunted, Ford kept working on a less expensive car: one that would be durable and dependable, yet sell for the magic figure of four hundred hard-earned dollars.

It was the creation of Vanadium steel that made the Model T possible. The material was easy to work on in assembly, but durable enough to hold up under any and all punishment. Finally, in October of Nineteen oh-eight, Ford introduced the first Model T. It was green with red pinstripes; and, while it also listed for eight hundred dollars, it made plenty of money at that figure. Ford had realized that the way to bring his car down to a price that the average American could afford wasn't in the design of the car, but in the assembly process.

Now that the Model T was in production, Ford could and did spend his time figuring out ways to assemble it more cheaply. By Nineteen fifteen, Ford had managed to get the price under five hundred dollars, and by the end of its production run in Nineteen twenty-seven, the now plain black Model T started at two hundred sixty-five dollars. The combination of the Model T"s falling prices and its durability under all conditions made it a solid success. And once Americans could afford cars, they just couldn't keep from buying them.

Story 42
Creation of General Motors
Larry Hice – General Motors Corp.

Today very few Americans know the name of William Durant, but it was he and he alone who created General Motors.

Durant was born on December eighth, Eighteen sixty-one. His grandfather was a

wealthy Michigan governor, and his own father a drunk, stock speculator and ne'er-do-well. When he was a child his mother left his father and moved young Billy back to her family home in Flint, Michigan.

At first it appeared that Billy Durant was going to follow his father's example more than his grandfather's - he dropped out of school at seventeen. After that Durant worked a number of meaningless jobs before he found his true calling, sales. Along the way he sold real estate and insurance; but in Eighteen eighty-six, when Durant was only twenty-five, a friend showed him the designs for a lightweight carriage. Impressed, Durant talked a local banker into lending him two thousand dollars to take over a local carriage firm and make his friend's plans a reality.

The company was called the Durant Dort Carriage Company. Within a couple of years it was selling some fifty thousand carriages annually. In time Durant Dort would become the largest carriage manufacturer in America.

By his fortieth birthday in Nineteen oh-one, Durant was a multi-millionaire, living in New York and playing the stock market. In Nineteen oh-four his Flint, Michigan, friends called him with another opportunity: Save the struggling Buick Motor Company.

Durant returned to Flint and decided that his talents could easily save Buick. It only took four years before Buick sales were right behind Ford's.

Durant realized that the automobile industry was ripe for consolidation. So, with the help of J. P. Morgan, he decided to make a run at buying the best companies. Toward that end, Durant incorporated General Motors in September of Nineteen oh-eight. Oldsmobile was the second car company to join GM, followed by Oakland, which later became Pontiac. A year later Durant talked Henry Leland into selling Cadillac to him for less than five million dollars. Durant almost talked Henry Ford into selling out. But Ford demanded cash instead of stock. Durant was out on Ford.

By Nineteen ten Durant was over-leveraged; GM's banking syndicate threw him out. No problem, he just went across town and started Chevrolet, then used Chevy's stock to retake GM again in Nineteen sixteen.

Durant lost his company a second time in Nineteen twenty, again due to over-leveraging himself in the stock market. This time he was gone for good. In time so was his personal fortune. At the end of his life he was running a bowling alley and trying to leverage it into a national chain, believing it would become the national sport of the average American.

For the most part Durant was discredited then as a genius of industry, which today we know he truly was. Just before his death in Nineteen forty-seven, Durant turned to his wife and said, "Well, they took it all away from me, but they cannot take away the credit for having done it." For decades we even tried to do that. Now we've corrected that story.

Story 41
Detroit WWII

Kevin McCarthy - 570 KLIF

There is very little doubt that the Second World War would never have been over as quickly as it was if it hadn't been for the industrial might of America.

Even the Japanese military believed that if they didn't win the war within the first year, all would be lost. America could manufacture war materials at a far faster rate than they could, and would turn the tide of the war.

Of course America's industrial might was Detroit and the automobile industry. It is hard to believe today, but just five years before we entered the Second World War, Detroit wasn't just the powerhouse of America's dynamic industrial machinery. It also far outperformed Germany's and Japan's industrial capability - so much so that American soldiers fighting in Europe were met by German troops ferried to the front in Ford trucks.

Both the V-1 and V-2 rockets that rained terror down on England contained many parts built by Opel, which was still owned by General Motors. The primary automotive supplier to the Japanese army, Nissan, built vehicles with Ford's machinery, stolen when Japan ran Ford out of the country in the late thirties.

President Roosevelt knew the enemy was going to take advantage of Detroit's machinery overseas, but he also knew that America still had the ability to out-produce the enemy in military goods. Moreover, he knew that whoever could create the most war materiel would win the war. Even before we declared war on the Axis powers Detroit was already building goods for Britain under the Lend-Lease Act.

Within weeks of Roosevelt's declaration of war, Detroit was moving to support it. Car production stopped immediately. Within twenty days all machinery to build cars was out of the plants, replaced by new equipment to build war materiel. All this could only have happened so quickly because we had two generations of engineers already trained for heavy equipment.

Top executives with GM and Chrysler quit their jobs and took administrative posts in Washington to coordinate the war effort. Big Bill Knudsen, GM's president and the man who really invented the moving assembly line, led this group.

Over the next three years General Motors built thirteen thousand bombers, two

hundred six thousand aircraft engines, thirty-eight thousand armored fighting vehicles, a hundred ninety thousand artillery pieces and one hundred ninety-eight thousand diesel engines. Ford gave the military eighty-six hundred B-24 bombers, two hundred seventy-seven thousand Jeeps, twelve thousand five hundred armored cars. Chrysler built the tanks and our anti-aircraft guns. What's more, they did it so quickly that we were shipping these weapons overseas within a month of the outbreak of hostilities. It's no wonder that Detroit was called the Arsenal of Democracy.

Almost as quickly, Detroit returned to automobiles when the war ended. But there's really no doubt about one fact: We won that war because we loved the automobile. We loved it so much that Detroit was the most powerful industry in America - and the world.

Story 40
Radios in Cars

John Austin
- Fort Worth Star Telegram

Car radios. Today many cars and trucks owners buy a particular model simply because a buyer is impressed with the quality of the sound they produce. However, there was once a time in America when the only music in the car came from its passengers' singing - and singing very loudly.

For the first quarter-century of automobile sales, radio as we know it today didn't even exist. Even if it had existed, cars didn't have solid one piece bodies - you probably couldn't even have heard a radio over the noise of the ride if you wanted to.

Most people know that Marconi invented the wireless not long after the first automobiles made their appearance in the late eighteen hundreds. The most Marconi's wireless was good for was transmission of Morse code. It was an American scientist, Lee DeForest, who invented the Audion tube in Nineteen oh-seven; it allowed fluctuations in voltage current that could be used to recreate the spoken word, and therefore made radio possible. Unbelievably, DeForest didn't even know his creation could do that. Herbert Armstrong, another scientist, used DeForest's Audion tube to modulate radio frequencies, and with that radio was born.

The first radio broadcast ever was one of a concert performance by the Georgia Tech band in Atlanta, Georgia, in the first half of Nineteen twenty. On July second, Nineteen twenty-one, a heavyweight boxing championship was broadcast for the first time, as Jack Dempsey defeated Georges Carpentier. The bout took place in Hoboken, New

Jersey, and was telegraphed to KDKA in Pittsburgh, for rebroadcast by that station.

Just two years later, at the Nineteen twenty-three Springfield, Massachusetts auto show, there it was — a car on display that had a radio in it. Then in Nineteen twenty-six, a Long Island company, Heinaphone, created the first radio actually designed for automobiles.

However, it was Walter Chrysler who first introduced a car radio as an option in his 1929 DB Senior Six. That particular radio was two feet wide, eight inches high and sixteen inches deep. It was so large it had to be installed under the back seat and the remote controls put on the steering wheel. That idea, by the way, is now coming back.

Buick was the first to put the radio in the center of the dash in the early thirties, and they've been there ever since. Over the years we've gone from radios to record players in cars, then on to four and eight track tapes before settling on cassettes. Pioneer gave us the compact disc player for cars in Nineteen eighty-four. And here you are, listening to me on the original entertainment piece for automobiles, your AM radio.

Story 39
Lincoln Highway

Larry Alexander
-Manufacturers Auto Leasing

The first big push for national highways came from the most successful car dealer in America, Carl Fisher. Born on January twelfth, Eighteen seventy-four, he grew up in poverty. However, Carl Fisher was a natural born salesman.

At seventeen years of age Fisher talked George Erland, one of the nation's top bicycle makers, into granting him a dealership. Erland liked the boy so much he gave him his first 120 bicycles on consignment. In Nineteen hundred, Carl Fisher converted his bike store to automobiles, selling Oldsmobiles, Packards, REOs and Stoddard-Daytons. Over lunch one day at Pop Haynes' restaurant, Fisher sketched out plans on a napkin for a raceway for Indianapolis. He then bought the old Pressley farm outside of town, and there he built the Indianapolis Motor Speedway.

Still, one thing bothered Fisher: The condition of the roads in America. Fisher had been to Europe and marveled at the quality of their roads. He also believed that for

motoring to really take off, America needed highways - good ones, made of asphalt. That became his quest in Nineteen twelve.

Fisher figured that it would cost ten million dollars to build a highway from New York to San Francisco - cheap today, astronomical back then. So on September tenth, Nineteen twelve, he held a dinner in Indianapolis to explain his idea. That night the city's businessmen pledged three hundred thousand dollars toward what was then called the "Coast to Coast Rock Highway." Within thirty days a million was in the bank. Goodyear tires kicked in another three hundred grand. Salt Lake City gave a million and a half. In fact, the only person who didn't give anything was Henry Ford. However, his son Edsel paid to build many of the campgrounds along the highway.

Seventy volunteers decided to drive the route to raise excitement for the road. The group was called the "Hoosier Tour" but the local press renamed them the Indiana Trail-Blazers. The deal they sold was simple: Cities would put up the equipment and manpower, and the association would provide the materials.

On July first, Nineteen thirteen, the road was officially renamed the Lincoln Highway, an idea put forth by Henry Joy, president of the Packard Motor Company. Work started shortly thereafter. Politics, of course, came into play: Colorado and Kansas were bypassed. Utah fought over the direction the road should travel. There was never enough money and so on. However, it was finally completed. Moreover, the idea of coast-to-coast highways caught the public's imagination, enough so that the government passed the Federal Highway Act of Nineteen twenty-one - which provided matching funds for states to build roads.

The Lincoln Highway Association disbanded in Nineteen twenty-seven. By then the government was well on its way to controlling our roads. One last deed was needed to keep the memory of the Lincoln Highway alive. One September first, Nineteen twenty-eight, thousands of Boy Scouts fanned out across the Lincoln Highway from coast to coast, and at every mile they put down a small bust of Lincoln and the inscription: This highway dedicated to Abraham Lincoln. That final act of dedication by the Boy Scouts commemorates our first national highway - built not by the government, but by the genius of America's top car dealer, Carl Fisher.

Story 38
Ford's First Car

Jeff Ward – Announcer Wheels

Henry Ford built his first car by hand, in his garage. That's pretty amazing, but possibly the most amazing fact about it is that he attempted it during one of the most vicious depressions to ever hit the United States.

Ford first came up with the idea of building his own automobile in Eighteen ninety-one, while he and his wife Clara were still living on a farm his father had given him. Like many would-be inventors, Ford had heard about the automobile's success in Europe. He sketched his first designs on the back of Clara's organ sheet music. After he showed it to her and she agreed he should build it, Ford decided he would have a better chance of getting the needed supplies in Detroit.

On September twenty-fifth of that year, then, Henry and Clara moved to what would be the home of the first Ford car, a duplex on Bagley Avenue in Detroit. Henry took a job with the Detroit Edison Illuminating Company as a field engineer. That job gave him an exceptional income to pursue his car design - and plenty of free time for creativity.

Now, you can't tell the story of Ford's first car without mentioning his supporters - one of whom was his wife, Clara. As Ford put it, "I am always certain of results. They always come if you work hard enough. But my wife is always more confident than even I am."

The other big supporter of Ford's first car was their neighbor on Bagley Street, Felix Julien, who lived on the other side of the duplex. For behind the duplex was a shed that both the Ford and Julien families were supposed to share. But Felix Julien was so impressed with Henry's determination that he moved all of his family's coal, wood and supplies out of the shed to give Henry more room to work on his car. It was said that the Juliens' living room was loaded with as much coal as furniture.

Ford finished work on his first engine on Christmas Eve, Eighteen ninety-three. By that time a depression had taken over the nation. In Detroit alone, thirty-three percent of the population was unemployed. Six hundred banks closed their doors. Over a hundred railroads went bankrupt. Seven hundred manufacturing firms in Detroit closed. Children were abandoned by their parents and walked the streets of Detroit begging for food. In the midst of all this suffering, Ford kept working on his first car.

Ford completed his vehicle, which he named the Quadricycle, on June fourth, Eighteen ninety-six, at four o'clock in the morning. Then and only then did he notice that his car was wider than the door to the storage shed. Thinking nothing about it, Ford grabbed an axe and chopped half the shed down to get his car out. Then at four thirty in the morning, Ford went cruising around the streets of Detroit. But, since this was in the days before mufflers, Ford woke the city up everywhere he went.

His car finally broke down in front of a hotel on Washington Boulevard. All the hotel's guests had come downstairs to see what the racket was. No one was mad, though; instead, they were amazed at Ford and his vehicle. Repairs were made and Henry Ford drove his car home.

Never a sentimentalist, Ford immediately sold the car and used the cash to start work on his next vehicle. However, history was made early one Thursday morning, when Henry Ford took his first car cruising.

Story 37
Chrysler Airflow

Tom Tulley -Texas Automobile Writers Association

There is a saying that nothing is new, only forgotten. Today we talk about the aerodynamic qualities of our automobiles and how the improved drag coefficients improve gas mileage. But aerodynamic cars first happened in the market place back in the thirties; they were simply forgotten for half a century until Ford introduced the Taurus in 1985.

It was the start of the Great Depression when America fell in love with streamlined objects. Maybe the most noticeable and long-lasting design trend of that era was the change in the appearance of our trains. Gone forever were steam-driven locomotives, replaced by diesel hybrids with sleek new designs. Streamlining as an automotive art was first shown to the public at the Chicago World's Fair of Nineteen thirty-three. Cadillac, Packard and Lincoln all showed off what they believed would be the automotive designs of the future.

Meanwhile, Walter Chrysler was working with his engineers to design and build the first functionally aerodynamic car. That is, one that actually worked better because of its design. Chrysler even went so far as to hire Orville Wright to come in and consult on the project. The car was tested in wind tunnels just like aircraft. The body of this new car was built on with unibody construction, just like cars today. Unibody is where the frame and body are one piece, giving it the strongest possible structure while also being the lightest it can be. Chrysler demonstrated the strength of unibody construction by rolling his vehicle over a sheer cliff and letting it smash on the rocks below — with hardly a dent resulting.

The Airflow also had its front wheels right on the front bumper. This the first cab forward design gave the automobile an exceptional ride. And in Nineteen thirty-four the Chrysler Airflow was introduced to the public; it was the most advanced automobile ever designed and built by any car company.

Now today it's written that the Airflow was a dismal failure. That isn't quite true. First-year sales of the vehicle topped twelve thousand. Not a runaway hit, but

respectable for the depression. However, by its last year of sales in Nineteen thirty-seven only forty-six hundred were built.

Lincoln also introduced its Zephyr in that period. It too had aerodynamic looks, although there was no real engineering behind them. The Zephyr also had a V-12 engine that the regular Ford V-8 could easily outrun.

It should be noted that the Airflow was aerodynamic and looked ugly. The Zephyr only looked aerodynamic, and it was beautiful. It outsold the Chrysler. At the end of the Airflow's production run, Walter Chrysler wrote his autobiography, giving rich detail on his life and accomplishments. However, there was not one word about the Airflow and its innovations in his book. It almost seemed he was embarrassed about the car.

In the late seventies and early eighties Japanese and American automakers went back and copied everything about Chrysler's Nineteen thirty-four Airflow. Its aerodynamic design, its unibody construction and even its cab forward look went into new car designs that were not only safer but got better gas mileage. The Airflow wasn't ugly, it was just a half-century ahead of its time.

Story 36
Evolution of the Gas Station
Norm Alden -Actor

In a wonderful scene in the movie Back to the Future, where I played Lou, the owner of the local soda shop, Michael J. Fox lands in mid-fifties town of Hill Valley just as a car pulls into a service station - where five uniformed attendants rush out, fill the customer's car, wash the windows and check the air and fluid levels. Of course, the joke was only funny because today you may have to honk your car's horn repeatedly before someone turns the self-service pumps on.

In some ways, however, we've come full circle in the way we buy our gasoline. You see, when it all started before Nineteen ten, we bought our gasoline in grocery stores. Some of the more progressive car dealers also handled gasoline, as did some hardware stores. But usually, if you could afford to buy a car in those days, in order to get fuel for it you'd drive to your local general store, buy a gallon or two of gas - which came in tin cans - and pour it into your car's tank yourself.

At the time, gas was gas; there were no brand names to choose from for the most

part. However, once the Standard Oil trust was broken up in Nineteen eleven, name brands started appearing, though only for motor oil at first. Names like Pennzoil and Quaker State, still with us today, were the first of the name-brand oils.

From grocery store sales, as more and more cars started cruising America's streets and roads, the filling station evolved. Now the term "filling station," although you may still remember hearing it used, really meant one particular type of gas station that developed around Nineteen ten to Nineteen twenty. At a filling station, the retailer simply put a gas pump right on the street curb. This is also where the term "curbside service" came from.

Starting in the Nineteen twenties, though, filling stations became gas stations. Restrictions by local fire and police departments removed gas pumps from curbs across America. The police didn't want cars sitting in the streets getting gas and tying up traffic. Fire chiefs thought that ordinary citizens pumping their own gas were dangerous.

Now, although filling stations were becoming the norm from Nineteen ten to Nineteen twenty, a St. Louis Shell Oil agent had actually built the first drive-in gas station in Nineteen oh-nine. The next year saw the first gas station with an overhead canopy - the Central Oil Company's station in Flint, Michigan. By Nineteen twenty, more than fifteen thousand American stations were selling name branded gas. The major oil companies fought this increased competition by making their stations more accommodating. And, just so they'd fit in with residential neighborhoods, gas stations were made to look like little houses ... They were also more likely to clear zoning restrictions that way. The twenties were also when the gas station attendant became part of every driver's life.

Full-service stations came into being in the thirties. It happened because in Nineteen twenty-six the average price of gasoline in America was twenty-six cents a gallon - but by Nineteen thirty-five it had fallen to twelve cents. So gas stations again changed their appearance; now they sprouted bays for light mechanical repairs. This was also when windows started getting washed and oil and fluids checked - there was more money in selling service than there was in selling gas. The service station stayed with us until the sixties.

Then two things happened: We had two energy crises, fire codes changed so we could now pump our own gas. Small service stations died, just as national convenience stores figured out that if they could sell us gas we'd also buy their bread and milk. So, from buying gas in cans at the general store, we went to filling stations at curbside, to real gas stations in the twenties to service stations in the depression. Now we've gone back to buying and putting gas in our cars ourselves - at today's little general store. The modern gas station and self-service pumps are simply variations of the way Americans first bought gasoline, way back in Nineteen oh-four..

Story 35
National Highway Traffic Safety Admin.

Pat Summerall

Before they decide to buy a new car these days, most people ask the salesperson one question: "Is this car safe?" For close to seventy years, though, no one in America cared about automobile safety. Think that's not true? Consider this: Close to a quarter of a million Americans lost their lives fighting the Second World War. During that same time here in the States almost a hundred thirty-five thousand people were killed in automobile accidents. Moreover, this was when the national speed limit was thirty-five miles an hour imposed as a way to conserve fuel.

Within six years, almost twice as many people died on our highways as were killed in the Korean War. Yet as late as the early sixties, no one questioned the safety of their automobile. True, Congress was holding hearings on highway safety in Nineteen sixty-five, but everyone sitting on that panel knew that nothing would be passed. Then a Congressional Security Guard caught private eyes hired by General Motors tailing a local reporter they'd mistaken for Ralph Nader. When that story hit the media, it made many Americans wonder how they had survived so long in their own personal, very dangerous automobiles.

So the National Highway Traffic Safety Administration was created by law in Nineteen sixty-six. Its aim was to protect the public from the automobile manufacturers and their obviously unsafe cars. The only problem was that you and I were still ignoring automobile safety. The proof? Ford offered anti-lock brakes on certain vehicles starting in the late sixties. No one bought them. No one paid more money to buy the safer radial tires car companies offered either. General Motors gave us air bags in Nineteen seventy-four, but the public passed on those items also. The fact is — we didn't even buckle up.

As for safety research, the government might have been handing out mandates left and right on how to make cars safer in those days, but it was Germans who were doing most of the cutting-edge work on real automobile safety. Mercedes-Benz was working on collapsible front-end designs to make sure their cars occupants were safe in front-end collisions. And to make sure their system really worked, Mercedes cut a deal with the German government to allow them to use prisoners as live crash-test dummies: If the prisoner survived the impact, he was paroled. Gruesome, huh? On the other hand, Mercedes never patented its safety systems. The company gave other automakers carte blanche to use its designs, which they all did. Your vehicle's

safety today is based on what Mercedes-Benz created in the seventies.
However, the National Highway Traffic Safety Administration kept plugging away, waiting for someone to listen. Someone did: Lee Iacocca. He'd always downplayed automobile safety, but in Nineteen eighty-eight he needed a gimmick to help sell his outdated Chryslers. So, sensing that the time was finally right to jump on the safety bandwagon, Iacocca introduced air bags on Chryslers Nineteen eighty-eight vehicles. Then Chrysler spent money airing ads in which people claimed Chrysler's air bags had saved their lives. America signed on.

Nevertheless, none of this would have happened if the National Highway Traffic Safety Administration hadn't been formed in Nineteen sixty-six. America ignored their pleas for safer cars until Mercedes and Lee Iacocca finally got the point.

Story 34
Modern Advertising

Angie Richardson – Editor

Ned Jordan wasn't a great car manufacturer and history doesn't remember him for that. What we do remember is that he changed the landscape of advertising in America, trying to find a way to sell his Playboy line of automobiles.

Before Nineteen twenty-three, advertising in America was plain and straightforward. That is, an ad for an automobile would simply state a couple of facts about the product. A Nineteen thirteen ad for the Oldsmobile Limited gave a brief history of the company - omitting to mention the fact that the founder of the firm, Ransom Olds, had quit in disgust after just a couple of years.

Another ad tried to sell us the Nineteen fifteen Buick by stating it handled well on snowy streets. It didn't. That ad also pointed out that the car's windows rolled down for cool and airy driving even in the hottest weather. It didn't do that, either. However, even ads for soap products simply said, "Brand X will get you clean."

In Nineteen twenty-three Ned Jordan was worried about his car company failing. Worse yet, he didn't have a clue what to do about it. Riding a train in Wyoming that year, Jordan watched as a woman on horseback rode up, raced alongside the train for a while, then galloped off into the distance. Jordan then asked a fellow passenger if he knew where they were. "Somewhere west of Laramie," was the gentleman's reply.

Jordan was inspired: He immediately wrote down a new ad for his Playboy automobile that changed advertising forever. A change that last to this day. Why? Because for the first time, he had used images and emotions to sell a product. Appropriately, the ad's headline was "Somewhere West of Laramie." It reads in part: "Somewhere west of Laramie there's a bronco busting, steer roping girl who knows what I'm talking about. She can tell what a sassy pony is, a cross between greased lightning and the place where it hits. The truth is — the Playboy was built for her. Built for the lass whose face is brown with the sun when the day is done to revel and romp and race. She loves the cross of the wild and tame. Step into a Playboy when the hour grows dull with things gone dead and stale."

Playboy car sales took off. More than that, "Somewhere West of Laramie" and its imagery were immediately copied by every advertising company in America.

Ned Jordan's car company failed nine years later in the Depression.
Nevertheless, he sold America on a whole new type of advertising, one that evoked images of what a product could do for our psyche. And he changed advertising forever.

Story 33
Computerization of Cars
Dan Bennett - The Boss

There once was a time in America that the average teenage boy with a little mechanical skill was capable of fixing his car, regardless of whether that involved setting his engine's timing or even rebuilding his carburetor. For decades the American male, when he went car shopping, wanted more than anything else to look under the hood, if only to see how difficult or easy it might be to do some routine maintenance. But, while today good car salespeople still give most everyone the customary view under the hood, here's the reality: Most people know that if a car breaks, you have to be more computer genius than mechanic to fix it.

We have the space race to thank for that. During the sixties NASA knew that in order to go to the moon computers would have to be made smaller and smaller in order to do critical calculations in our spacecraft. Back on the planet, large mainframes could still do most of the necessary math. That led groups like Intel and Motorola to design smaller and smaller transistors for our space program. Although it didn't quite happen by the time we first walked on the moon, Intel perfected the microprocessor in Nineteen seventy. Motorola was one of the first to manufacture the device.

Now the first use of the computer chip in an automobile isn't nearly that exciting. In Nineteen seventy-five, General Motors asked Motorola to design a microprocessor that did nothing more than measure distance covered on a trip. However, it was a start. It was the Ford Motor Company that first realized the real value that microprocessors could have for the overall function of an automobile.

In Nineteen seventy-seven Ford asked Motorola to design a much more complicated chip that would control fuel flow along with the timing and spark for their Nineteen eighty automobiles. And then Chrysler embarrassed us all with a stupid chip that used a robotic voice to announce: "Your door is ajar." A jar it wasn't. The door was ... open.

Next came digital dashboards, which often went out when the heat of the sun melted the silicon in the chip. However, from the mistakes of digital dashes, makers of computer chips for automobiles learned how to make their devices more durable.

Today everything in the modern automobile, from anti-lock brakes, fuel injection systems, radios, navigation units and the shifting of the gears in your transmission to pollution control devices, are controlled by microprocessors. There's more computer power under the average car's hood today than there was on board the Apollo spacecraft. That fact, more than any other, explains why maintenance schedules, especially for tune-ups, have been reduced so dramatically.
So - the modern car owes as much to the space race as it does to Henry Ford. And it all started with a simple trip computer on General Motors' cars exactly twenty-five years ago..

Story 32
Seat Belts

Bob Cox - Fort Worth
Star Telegram

It seems so obvious today, but for the first seventy years of the automobile industry, virtually no one wanted, or at least asked for seat belts in their cars.

Believe it or not, seat belts started showing up in horse-drawn carriages as far back as Eighteen eighty-five, and in substantial numbers. The army even put seat belts in its very first airplane, back in Nineteen ten. Racecar drivers demanded and got seat belts in Nineteen twenty-two. However, as far as automobiles went, seat belts weren't cool.

Preston Tucker was the first automobile maker to insist that his new car have a seat belt for each occupant, along with many other safety items. His advisors did tell him to lay off all the seat belt safety stuff in his speeches and press releases; they said the public might get the wrong idea and think his car was inherently unsafe. Of course Tucker only built fifty some-odd cars before going out of business.

Now GM, Ford and Chrysler ignored Tucker and his vision, but little Nash offered seat belts in its Nineteen fifty Statesman models. They didn't sell very well. Ford offered seat belts and padded dashes in its cars for Nineteen fifty-six, and even sold the idea of safety in their ads. Chevrolet flew past Ford in sales.

It was Nils Bohlin of Volvo who invented the modern three-point seat belt in Nineteen fifty-eight, and that system became standard on Volvos the next year. Big yawn. By Nineteen sixty-four seat belts were beginning to appear in American automobiles, although the dealer could still delete the option and get ten dollars' credit. Most of them did.

It wasn't until Nineteen sixty-eight that the government ordered seat belts in automobiles for all forward-facing passengers. Nevertheless, no one wore them. Then in Nineteen seventy-five, a federal law forced an interlock system that meant your car wouldn't start unless the seatbelts were buckled. Customers demanded those systems be bypassed.

No, it wasn't until the eighties, when the Baby Boomers had kids of their own, that they insisted on seat belts and their usage. Not for themselves, of course, but for their kids. Today seat belts, which nobody wanted and no one asked for during the first seventy years of automobile sales, are now a four-billion-dollar-a-year business - as big a market as the record industry.

Story 31
Goodyear Invents Vulcanization Process
Lou Diamond Phillips

The automobile never would have happened if Charles Goodyear hadn't invented the vulcanization process for rubber in Eighteen thirty-nine.

Goodyear had come from a family of inventors. His father Amasa perfected and manufactured the first pearl buttons to be worn on clothes here in America. Amasa

Goodyear also provided all of the military's metal uniform buttons for the War of Nineteen twelve.

As a young boy, Charles Goodyear informed his father that he wanted to become a minister. His father would have none of it; he moved his son into the business world. But Goodyear was always a dreamer and idealist; and, although those traits make for great inventors, they often mark an individual who's unable to deal with the reality of financial responsibilities.

When Goodyear first married, he and his wife Clarissa moved to Philadelphia, where he opened the nation's first hardware store. It prospered for a few years, but failed during the financial panic of Eighteen twenty-seven. Rather than declaring bankruptcy, which Goodyear believed was immoral, he instead chose to be sent to debtors' prison - a place he would get used to, as he would be in one on and off throughout his life.

Once he left prison, Goodyear took his family back to Woburn, Massachusetts. In Eighteen thirty-four, while visiting New York City, Goodyear came across the Roxbury Rubber Company, where he saw a life preserver with a badly designed valve. A few days later he returned to the store with a better inflation valve. It was then that he struck up a conversation with the owner, E. M. Chafee. Impressed with Goodyear's invention, Chafee told him what he really needed more than anything else: Someone, he said, should come up with a way to keep rubber products from melting in the summer and cracking in the winter.

For Goodyear, that conversation began a five-year quest. He turned his wife's kitchen into his laboratory. Of course, he could only use it during those periods when he wasn't in debtors' prison yet again.

In Eighteen thirty-eight, he met Nathanael Hayward, who had discovered he could make rubber pliable by mixing sulfur with it and leaving it in the sun to dry. Goodyear bought Hayward's patent for two hundred dollars, then immediately found a better way to solve the problem. Goodyear found he could wash rubber in nitric acid for a more solid, durable result. For that he received his first patent; however, rubber still had certain problematic tendencies.

By now his wife was furious; Goodyear continued to keep his family in direst poverty. It was her nagging that finally led to Goodyear's greatest invention. One day in Eighteen thirty-nine, while his wife was shopping Goodyear was experimenting again when he heard someone walking up to the house. Fearing that it was Clarissa, Goodyear hurriedly threw a mixture of rubber and sulfur onto her stove, trying to finish his experiment before she caught him at it. This time Goodyear had accidentally found the perfect combination. Using the new process he called vulcanization, Goodyear made rubber that was durable, pliable, and long-wearing.

Still, however, he didn't profit from his invention; Goodyear wasn't enough of a businessman to do that. Charles Goodyear died in Eighteen sixty, having just gotten out of debtors' prison one last time.

The company that bears his name was created in Eighteen ninety-eight, just in time to take advantage of America's new automobile industry. Lucky for us: If Goodyear hadn't invented vulcanization, cars would never have taken off - because practical rubber tires would never have been possible.

Story 30
Financial Impact of Auto Advertising
Ron Jackson – Fox Four News

Fourteen billion dollars. That's how much money car dealers, automobile manufacturers and oil companies spend each and every year on advertising to try to get you to buy their new vehicles and, once you do, to help you decide whose gasoline should power it. That's right, primary automotive advertising annually equals fifty-five dollars spent for every man, woman and child in America. That's Primary advertising: That figure doesn't include car owner-related advertising, such as McDonalds, Sonic, Taco Bell, batteries or tire manufacturers. Nor does it include aftermarket products like car waxes and other automotive services.

Nevertheless, automotive advertising is wasted on me, you say. I haven't bought a new car in so long I've forgotten what they smell like. And I'd never buy anything but the cheapest gasoline available. You say you're immune to the non-stop barrage of ads that urge you to buy a car or put a tiger in your tank, so that massive advertising expense means nothing to you?

Well, actually, it means plenty — if only because automotive advertising is what actually finances so many of the things you look forward to.

Just for a moment, let's look at a parallel universe: On this world, automotive advertising neither exists nor is needed to sell those products to the public. What we have here is a pretty dull world, folks: Not nearly as much entertainment or recreational enjoyment as the one you live on. You see, without that fourteen billion dollars spent on advertising, many prime time TV shows would never be filmed because the networks wouldn't be making near the money they are. Now think about the last Super Bowl Game you watched. Didn't it seem like every other ad was for automobiles or oil companies? That's right! Spectacles like the Super Bowl are provided to you free of charge because of automotive ad dollars. Even special events like the Olympics wouldn't be broadcast to the extent they are if the Olympic Committee and the networks weren't getting hundreds of millions of dollars in sponsorship money from

car companies to be, and I quote, “The official car or truck of the Olympics.”

Now let’s move on to radio. Whether they broadcast talk, country, or Top Forty Music, radio stations derive the greatest percentage of their ad revenues from selling cars.

Next up, your local newspaper. Sure, you’re a news junkie and want to get the latest stories from around town and the world. But if there weren’t a hundred ads in the paper every day trying to get you to buy some dealer’s new car at this weekend’s one time only unbelievable discount, how many pages of real news would the paper have to cut to stay profitable?

Of course the same can be said of your favorite magazine, which is always loaded with those four-color, airbrushed pictures of cars and trucks, which never look quite as good on dealer’s lots as they do framed against the majestic Rocky Mountains.

You may not buy a new car or truck this year. And you may not want to switch over and pay a higher price for gas just so you can have Techron as your additive of choice. But, from your favorite television shows to your personal reading material, right down to this show today, your leisure entertainment and pastimes are largely funded by those who sell America on buying the latest and greatest cars. Fourteen billion dollars worth of advertising each and every year.
That’s a lot of Super Bowl games.

Story 29
America Goes Camping Crazy
Ron Chapman - KVIL

Americans before the First World War took their vacations fairly close to home. For the most part luxury liners were for the rich, or for immigrants finding their way to the U. S. in third class. So parents would take their families out of the filthy, overcrowded cities by train to the local beach; luckier families took a short ride to some lakeside village.

However, as the public became motorized in those days of Prohibition and flappers, the automobile also created camping mania. The story of our National Park System follows closely our grandparents’ love affair with the automobile and camping.

In Eighteen seventy-two Yellowstone National Park became the first national land put aside by Congress as a "public park and pleasuring ground for the benefit and enjoyment of the people." The people came from all over the world to marvel at its famous geysers, canyons, mountains and wildlife. Access was a bit difficult: To get to Yellowstone at the turn of the century it was necessary to travel first by train and then by horse-drawn wagons in order to enjoy the park. Very few individuals could afford the trip, much less afford to take three weeks off from work to make the journey.

In chronological order: First came cars. Then came people wanting to use those cars to escape the city. As a matter of fact, the camping craze of this century's first three decades saved the national parks.

Because of the automobile so many people wanted to go camping that by Nineteen oh-eight Mount Rainer Park Rangers allowed cars into their system for either sightseeing or overnight camping. Carter Lake allowed cars in Nineteen eleven, Yosemite in Nineteen thirteen and Yellowstone two years later.

Within a year of allowing cars Yellowstone saw more campers driving in than coming by rail. That was fine with them: Motorists were also charged admission fees, which immediately became our parks' largest source of income. By the middle of the Roaring Twenties, millions of Americans were going camping every year.

So many people suddenly became campers because of the automobile that Congress starting spending more money - not just to build roads in the park, but also to acquire more land for the national park system. From Nineteen twenty-five to the start of the Second World War, Bureau of Public Roads engineers worked with the National Park System to carefully pave all of our national parks.

Did you know that preservationists were also the first automobile owners? True: The Save the Redwoods League was started at the Pacific Auto Show in Nineteen twenty. The automobile owners kept California's Giant Redwoods out of the hands of lumber companies. The same can be said for national forests nationwide.

Even during the Great Depression, people kept right on camping. It was inexpensive, healthy and a good recreation for the family. Today environmentalists barely remember the history of how we ended up with our wonderful parks. But you know: They came about because the public loved the automobile - and wanted to drive to the most scenic parts of America.

Today the government is making plans to curtail the use of automobiles in our parks. You've heard the Zen question: If a tree falls in the forest and there is no one there to hear it, does it make a noise? Well, here's the modern variation: If the number of people falls in the forest because they can't have easy access to it, is it really a national park? Our grandparents didn't think so.

Story 28
Planned Obsolescense

Bobby Mitchell - 99.5 The Wolf

If you asked someone today what the term "planned obsolescence" means, you'd probably hear that it was Detroit's way of engineering cars so that they wouldn't last very long - and therefore would force owners into trading them in on a newer model.

Frankly, that's nonsense. Some reporter made it up in the late sixties, and it endures today as one of America's most popular myths. Detroit never designed or engineered items to wear out prematurely in order to force someone to buy a new car - there was no need to!

Why? Because back in the Nineteen sixties, American consumers traded in their automobiles an average of once every twenty-six months. More than that, the average trade-in had less than twenty-five thousand miles on it. The fact is, most cars could easily go that distance without a major breakdown.

No, planned obsolescence was really just a plan to change the way automobiles looked every year or two. The public could either buy a new vehicle or face the ridicule and embarrassment of driving something as outdated as a three-year-old design.

The legendary chairman of General Motors, Alfred Sloan, created planned obsolescence to deal with the saturated American automobile market in the mid-Nineteen-twenties. At the time, most Americans who could own cars already had one. Even more important, because car designs didn't change very often, owners weren't trading them in quickly enough to keep all the assembly lines open. So Sloan hit on the idea of changing GM's vehicles' exteriors, every year or two at most, to get people to trade their vehicles in more often. It worked, and worked well, for close to fifty
years.

It was the passage of safety and environmental laws, which took effect in Nineteen seventy-three and Nineteen seventy-five, that stopped the car companies from changing their exteriors so often. There just wasn't enough money - they couldn't design safer cars put out less pollution and still have money left over to change the body style. So cars kept their body styles for years on end. Improvements were made under the hood instead of designed onto the front fender.

Moreover, with that, the tradition of introducing new cars on September twenty-first

of every year went by the wayside. Remember how dealers used to keep the new cars on their showroom floors under cover until that date? The car companies found that while, in Nineteen seventy-four people still traded their cars in every twenty-eight months, by Nineteen eighty-five they were trading only once every fifty-eight months.

Today dealers get their new models whenever the factory introduces them. Cars like the old Cutlass Ciera were sold with the same body for thirteen years without a change. Today, now that cars are remarkably clean and safer than ever, car companies are once again spending money trying to introduce all-new models or change their body designs more often.

And, once again, the public has responded to this automotive excitement by buying new vehicles in record numbers. Just like they did when planned obsolescence was introduced, all the way back in Nineteen twenty-six.

Story 27
Women's Influence
on Automobiles

Debbie Diaz – KLUV FM

For the first hundred years males have dominated the automobile industry. However, those men have been far more influenced by women than they would ever care to admit.

Carl Benz, the inventor of the gas-powered automobile, more than likely wouldn't have succeeded if it hadn't been for his wife Berta. It was Berta who forced her husband out on New Year's Eve of 1879 to work on his internal combustion engine one more time. It finally came to life that night.

Henry Ford called his wife Clara his "great believer." And believe she did. One Christmas Eve, when Henry brought home his first engine to test, Clara moved everything around in her kitchen to accommodate him. She dripped the gasoline into the engine while Henry started it. Smoke filled her kitchen while she was preparing for their families' Christmas the next morning, but Clara took it in stride.

It was also Clara Ford who forced her husband into recognizing the auto workers' union rights before the Second World War. Clara told Henry that either he would settle with the union or she would leave him. Henry settled.

At the turn of the century it was considered improper for a woman to drive by herself. Theodore Roosevelt's daughter Alice changed that. The press kept asking Roosevelt

why he let his daughter out on her own in a car, to which Roosevelt responded, "I can either run the country or I can run Alice. But I can't do both." The President's acceptance of his daughter's driving allowed women to drive unattended everywhere.

A woman invented the windshield wiper: Mary Anderson of Alabama. She invented it back in Nineteen oh-five.

William Durant, founder of GM wasn't a car fanatic. But his seventeen-year-old daughter Margery loved to take one of her dad's Buicks and drive herself across Michigan on field trips. She finally convinced her father to drive with her. That's when Durant bought more car companies - and formed General Motors.

Walter Chrysler had retired rich from General Motors. His wife couldn't stand it; she told him to go back to work - or get out. Chrysler then started the car company by the same name.

However, women had even more direct input into the automobile business. By Nineteen twenty the car companies realized that women were helping make buying decisions. That forced them to come up with fast-drying paint - women were tired of black cars. Running boards disappeared to accommodate women's long dresses. Astonishingly, Dodge was giving sensitivity training to salesmen in the late thirties, because women were considered the decision makers by then. Women have raised automobile issues involving items from automotive safety to environmental concerns.

As for automobiles being a man's business? We've always been in control: We've just let the guys do all the hard work.

Story 26
The Electric Starter

Clark Richardson – Goodson Acura

It wasn't called an electric starter in the beginning. It was called the "Ladies' Aid," and it first appeared on Cadillacs in Nineteen twelve. Moreover, it was invented because of a lie.

The invention of an engine that would start with the push of a button instead of hand-cranking was a variation of the principle behind NCR's electric cash register. Both inventions came from the brain of the same man: Charles Kettering. Moreover,

Kettering had been wanting to leave NCR and work for himself.

He got the opportunity when a former NCR salesperson, Earl Howard, left the firm and joined Cadillac. Over lunches with his old friend, Kettering would be told of the problems with ignitions in modern automobiles. So at night, after working all day at NCR, Kettering and two of his co-workers would meet in a barn on Central Avenue in Dayton, Ohio, and work on a better ignition system for automobiles. That barn became the birthplace of Delco Electronics.

For the next year Kettering worked on ignition systems, and in late spring Nineteen oh-nine he showed his improved version to Henry Leland, then head of Cadillac. Leland was so impressed that he immediately ordered eight thousand of Kettering's units. Delco was on its way.

Now that cars were running better due to Kettering's invention, Leland decided that it was time to create an electric starter for the automobile. Up to that time starting a car was hard work, at best - at worst, dangerous. Moreover, Leland felt sales of automobiles would always be limited for that reason. However, he wasn't having much luck convincing Kettering to work on solving the problems of the electric self-starter. So Leland told Kettering a lie.

A friend of his, Leland told Kettering, had stopped to help a stranded woman motorist on the Belle Isle Bridge in Detroit. When his friend attempted to crank her automobile, the mechanism kicked back on him and broke his jaw; gangrene set in, and the man died. Kettering was touched by Henry Leland's tale of woe.

For the next fifteen months Kettering and the gang worked on the self-starter. Kettering decided early on that the unit would also have to be the car's voltage regulator, generator and alternator, in addition to actually starting it. Then Kettering had a flash of brilliance: The same design he'd created for the electric cash register would work as the mechanism for the automotive self-starter. On February eighth, Nineteen eleven, Kettering installed the first electric self-starter, on a Cadillac. While some things still needed to be worked out, it worked well enough that Cadillac placed an order for twelve thousand of them. The days of hand-cranking cars were over.

Oh, and the first person ever to take a ride in a self-starting car? As Kettering drove around Dayton, checking his invention for the first time, he saw an old friend from NCR at the train station and offered him a ride home. The gentleman was stunned that Kettering's Cadillac was self-starting. The two old friends then talked for hours about technology, and how it was making the world a better place. And that friend's name? Thomas Watson. The man who later founded IBM.

Story 25
Energy Crisis
1979
Johnny Rutherford - Indy Champion

1979. For the second time in less than six years, the lack of oil was about to put Detroit and America into another automotive depression. And unlike their reaction to the first, the public's automotive confidence would take until the early nineties to recover.

It was January sixteenth, Nineteen seventy-nine, when the Ayatollah Khomeini overthrew the Shah of Iran. While today most Americans simply remember that Iran held American hostages in our embassy in Tehran, the real damage to our country started
when the Ayatollah cut back severely on shipments of crude oil to the U. S.

While Detroit and their dealers had been concerned about the possible effect of another energy crisis from the start of the year, America got its first look at reality on April twenty-third, Nineteen seventy-nine. On that day, every gas station in Los Angeles closed for lack of fuel. Worse yet, there had been no prior warning of the closings. By mid-afternoon thousands of motorists were stranded on LA's freeways, victims of nothing more sinister than running out of gas and being unable to buy any - for there was none to be had that day at any price.

Now Americans had forgotten the lessons of the first energy crisis in nineteen seventy-three and fallen in love with their gas-guzzling V8s again. They started realizing that maybe this time the energy problem could have lasting consequences. And while some immediately ran to their local dealerships to trade in their large Buick Park Avenues on compact Chevrolet Chevettes and Citations, the majority of people bought Hondas and Toyotas or didn't buy anything at all. A case in point: In February of Nineteen seventy-nine, Nissan had one hundred thousand unsold small cars sitting on the docks in Los Angeles that dealers wouldn't accept. That was more than a third of what they needed for the year. Within ninety days, every single one had been sold.

Still, the worst was yet to come. Inflation, already a problem in the
seventies, became instantly unmanageable. The high price of oil caused the prime interest rate to skyrocket, hitting twenty-one percent within the year. Now, even if you wanted to buy a small car to replace your land barge, you paid two premiums to do so: More than list price for the small car and twenty percent or more interest to finance it.

By nineteen eighty-three the crisis was finally waning. Within a year Chrysler would introduce the minivan, creating the automotive sensation of the eighties. Ford likewise would bring out the Taurus in eighty-five, a remarkably user-friendly car created out of the chaos of the oil shortage. GM would continue to suffer from lackluster models and declining market share.

For those who lived though the last oil crisis, and Detroit almost didn't, it will always be remembered as the time that the automobile industry almost ceased to exist in America.

Story 24
Drive In Movies

Gary Cogill – Channel Eight

There's very little doubt that as this century started, the two things Americans fell in love with were automobiles and movies. However, it wasn't until Nineteen thirty-three that an auto parts salesman came up with the idea of putting movies and cars together, thereby creating the drive-in movie. His name was Richard Hollingsworth.

In Nineteen thirty-two, he owned Whiz Auto Products, which sold soaps, oils and greases for automobiles. Hollingsworth's first idea was for a chain of super gas stations. The buildings would have a Hawaiian theme, right down to thatched roofs. The gas pumps would look like palm trees. Movies would be shown behind the building for car owners at night. At the time, the idea of showing movies was only to get more nighttime business for the gas stations.

Still, the more Hollingsworth thought about it, the more he liked the idea of the open-air movie theatre for car owners. He experimented in his backyard by sitting in his car and projecting home movies on the side of his house. Hollingsworth ran a sprinkler over his car to simulate rain so he could see if the movie was still visible. He then designed a way for cars to park one behind the other and yet still keep the screen in view for everyone.

Hollingsworth even filed a patent for his idea for drive-in movie theatres with the government on August sixth, Nineteen thirty-two. With a few friends backing him, Hollingsworth started construction on the world's first drive-in theatre in Camden, New Jersey, on May fourteenth, Nineteen thirty-three - which was the exact same day that the government issued his patent on the concept.

The Automobile Movie Theatre opened on June sixth, Nineteen thirty-three. The very

first night it opened, the movie was a sell-out. That's surprising, because what they were showing was a second-run movie, Adolphe Menjou in "Wife Beware." The movie wasn't up to any high filmmaking standards; drive-in theatres would never live down that reputation, either.

Now the first drive-in didn't have the individual speakers that most of us grew up with. Instead, three huge speakers towered behind the movie screen. On windy nights, people could hear the movie miles away in their homes - yet no one ever complained. It was Frank Yassenoff's River Drive In, in Columbus, Ohio, that first gave us individual speakers for each car, on August seventeenth, Nineteen forty. For the next four decades drive-in theatres were America's choice for outside entertainment. At least, for couples with young children, and teenagers seeking a little privacy for dating.

So, what killed the drive-in theatre in America? The summer blockbuster movies in the middle seventies, starting with "Jaws." Now, it seemed, teenagers were far more interested in watching the films than in seeing if they could get to first base. Then, too, that generation grew up with air-conditioning, and didn't care to endure the summer heat sitting in a car. Better movie sound didn't reproduce well on those small speakers, either. For forty years, however, the drive-in theatre was the best of both worlds. Movies and automobiles: America loved them.

Story 23
Spindletop Oil Gusher

Bob Phillips
- Eight Country Reporter

More than anything else, for the automobile industry to take hold in America we were going to need gas - and a lot of it. America's first oil field, discovered by Edwin Drake on August twenty-eighth, Eighteen fifty-nine, was in Titusville, Pennsylvania. By the turn of the century, however, John D. Rockefeller and his Standard Oil Company controlled virtually every oilfield in Pennsylvania.

Now, at that time, everyone believed that all the oil in the world was in western Pennsylvania, with a few minor wells in New York, Ohio and West Virginia. A Standard Oil monopoly on petroleum would have been bad enough for the automobile industry, but that really didn't concern them at the time. The real problem, as Detroit and the world saw it, was that one day the Eastern oil wells would run dry - and that would be the end of the internal combustion engine.

At the turn of the century Beaumont, Texas, was a small town of nine thousand souls whose major industry was their sawmills. Patillo Higgins lived four miles south of the city and, for whatever reason, he was convinced that there had to be oil underneath what the locals called the Big Hill. It should be noted that Higgins didn't have any background to suggest he knew anything about geology. Nor did anyone believe at the time that oil existed anywhere but the East Coast.

Still, Patillo spent years drilling for oil south of Beaumont with no success. Finally in late Nineteen hundred Patillo gave up and leased his land to Anthony Lucas, who had once been a sailor but was also a mining engineer. Lucas also drilled into Big Hill for months with no more success than Patillo had found before him.

Then on January tenth, Nineteen oh-one, at eleven hundred and sixty feet down, Lucas found his elusive fossil fuel. The Spindletop Gusher exploded skyward, and the whole town felt its birth: That oil came up under so much pressure that it blew the pipes out of the ground. Rocks, sand, water and gas roared through the air. Cattle stampeded from the commotion, and black farmhands fell to their knees and prayed in the slippery rain, fearing that the end of the world was at hand.

Suddenly, Texas was contributing one hundred thousand barrels of oil a day, a figure no oil executive would ever have dreamed was possible. Of course, no one had pipelines or storage capabilities, so The Texas Company and Gulf Refining were created to handle Spindletop's oil. Today you know them as Texaco and Gulf.
Within months two hundred fourteen wells were pumping oil in Beaumont, and speculators had leased every piece of Texas land from there almost to Dallas, hoping to find more black gold.

In the next year, Nineteen oh-two, the Spindletop field produced more than seventeen million barrels of oil, but the end was already in sight. Two years later, barely three and a half million barrels of oil trickled out of Spindletop, and by Nineteen twenty-four the wells were all but abandoned.

It didn't matter. What was important was that oil had been found where no one had ever suspected it would be. So geologists started looking for oil everywhere. What's even more important, they found it - just in time for the mass production of automobiles.

Spindletop also ended Standard Oil's monopoly on the industry and created the legendary Texas oilman. Not bad for a couple of guys just guessing about finding oil underneath Big Hill.

Story 22
The Great Migration

Tony Ferguson – Son of Editor

America's final migration was the first automotive migration in history. For it was a time when millions of people, desperately seeking a better life for themselves and their families, drove away from their homes forever.

When you think of California, what first comes to mind? Hollywood? The beaches? The lifestyle? How about a charming Texas or Oklahoma drawl? That's right; just a couple of hours' drive north from LA you can see what remains of that last great American migration, in Bakersfield and the southern end of the San Joaquin Valley.

The four hundred churches there are mostly Pentecostal or Southern Baptist. Dr. Pepper signs hang in front of the city's cafes, the menus offer chicken fried steak and the jukeboxes play country and western music. A large part of California still has a Texas -Oklahoma flavor to it - and it all happened because of the Great Depression and the automobile.

There were actually two major migrations, both out of the South, starting at the end of the First World War. A steady wave of Blacks in the Southern states moved to the industrial north to escape the poverty and injustice of their home states. The majority of that movement made the move by rail.

However, at the same time a large contingent of farmers in Texas, Oklahoma, Arkansas and Missouri decided it was time to try their luck on the West Coast; the prevailing downturn in farm prices made it virtually impossible to make a living where they were. The first group left for the West Coast during the recession of Nineteen twenty-one. When the stock market crashed in Nineteen twenty-nine, those four states' former citizens made up almost eight percent of California's population. Close to a quarter of a million individuals had put down new stakes in the Golden State.

The movement west was easy to understand. California had been promoting itself to the rest of the nation since the turn of the century. The state took ads out coast to coast with the message, "In California you live life. Elsewhere you merely spend it." As early as Nineteen seventeen farmers in the Imperial Valley needed labor so badly that they were advertising in Texas and Oklahoma for farm hands.

Then the Great Depression hit. Those who hadn't already moved west became desperate - desperate enough to leave their homes and their friends, hoping against

hope that California would offer them jobs, even the most menial available. If they hadn't had automobiles, this American exodus could never have happened.

By Nineteen thirty-three, Texas alone was suffering under thirty-two percent unemployment. Those who had jobs received the magnificent average wage of two hundred ninety-eight dollars a year. Though none of these Texans believed that things were just as bad Out West, twenty-nine percent of California's citizens were out of work that year.

Banks foreclosed on one out of every ten Oklahoma farms from late Nineteen thirty-one to early Nineteen thirty-three. Then those who hadn't lost their farms to the banks suffered new tortures, as nature played the cruelest joke of all. Starting in Nineteen thirty-four and lasting for two years, not a drop of rain fell. Crops wouldn't grow and dust storm clouds obscured the skies for days on end. It was just too much.

Even the hardiest families piled into their worn-out Model T's and Dodge trucks, lashed all their belongings into the back, and headed west looking for a better life. Of course, very few found it; but, with no money and no way to get back home, they stayed there.

As the Second World War broke out, most finally found some sort of work, in either the armaments business or farming. Still other Southerners joined the migration for better work on the West Coast itself. The farmers who owned automobiles had started a westward migration that only ended in the late sixties. By that time, at least fifteen million Americans had driven west. There's no way that could have happened in covered wagons.

Story 21
The Refrigerator

Craig Eppling - General Motors

Today the news media continues to assail us with stories on tainted food supplies in America. However, seventy years ago we faced far worse problems with our food supplies.

Open-air markets and literal ice-boxes gave us bacterial and insect infestations in our food - as they had for centuries. Contamination was the rule of thumb. Enter the man who created General Motors: William T. Durant.

Refrigerators were developing three years before the First World War. But they didn't work very well, they were priced higher than most luxury cars, and their refrigerants could kill you if you breathed it. Only America's most exclusive hotels and richest citizens could afford them, and refrigerators weren't nearly reliable enough for either group to want to make the investment.

Now, no one knows why Durant bought Detroit's Guardian Frigerator Company in June of 1918. Maybe it was price: Durant bought the firm for only $56,000. Guardian Frigerator had only sold forty refrigerators, each at a sizable loss, in two years. No matter - Durant thought the iceless refrigerator would be a great product line to sell General Motors customers - assuming that they could be made to work safely, and that they could lower the price substantially.

Durant changed the name of Guardian Frigerator to Frigidaire. Just a few months later Durant sold Frigidaire to General Motors, which he also ran. The price? The exact same price he had paid for it: $56,000.

Two years later there was a horrible recession, was cast off by General Motors. Then GM faced dealing with Frigidaire. Since GM had acquired the company from Durant, Frigidaire had lost close to two and a half million dollars - money GM badly needed.

Early in 1921 GM's board met to discuss the fate of their money-losing division. They decided that perfecting the refrigerator was more important than the short-term losses.

Almost everyone on the board had either been sick from food poisoning or had someone in his family near death from it.

So, GM transferred Frigidaire over to Delco Laboratories. Then GM invested in improving Frigidaire's production facilities.

Now, at the time, Delco was already working on better refrigerants needed for Frigidaire. Within a couple of years they'd invented a far superior refrigerator and one that could also be produced less expensively.

By 1926 GM was selling 63,500 Frigidaires a year. The price? $486 dollars: About the same as a new Chevrolet.

In 1928, still working on a better refrigerant, Charles Kettering and Thomas Midgeley discovered Freon. GM decided to offer that coolant to other makers of refrigerators in order to put more of them in homes. While profit was certainly involved, GM seemed to be more concerned about saving Americans' lives.

By 1932 Frigidaire had sold over 2 million refrigerators. Moreover, because of their success, other companies entered the field, and prices just kept coming down.

From preserving food to saving people by safekeeping needed medical vaccines internationally, refrigerators have saved lives and improved the health of the world. All because Billy Durant bought a money-losing refrigerator company and General Motors made the decision to lose even more money to develop it.

Story 20
Energy Crisis
1973
Cubby O'Brien – Mouskateer

No one in America had ever thought that gas would be anything less than plentiful before the winter of Nineteen seventy-three. After all, this was a country where gas price wars in the late sixties would often bring the price of fuel down to twenty-one cents a gallon. About the same as gas sold for three decades earlier. However, America was in for its first big awakening.

Our first energy crisis was a result of the Middle Eastern countries' anger over our backing the Israelis' during the Arab Israeli War. At the same time, the Organization of Petroleum Exporting Countries, or OPEC, realized that their oil fields couldn't possibly produce forever - and that when that oil supply became exhausted, so would the influx of hard currency from developed nations dependent on oil for their national economies.

OPEC decided to cut back on the production of mid-Eastern oil in order to prop up the wholesale price while sending a message to Washington about our support for their enemies. The actual reduction in production was really quite small, only a seven percent cutback. But that small cutback was enough to panic both governments and oil companies. A bidding war for crude oil started and wouldn't abate for the next half year. By then gasoline prices at the pump had risen from twenty-nine cents a gallon to almost a dollar in many parts of the country.

More than that, because panicked consumers were constantly filling and topping their tanks, gas lines formed across America. Some cities even went to rationing gas on an even-odd license plate number scheme.

Although the energy crisis of Nineteen seventy-three wasn't nearly as damaging economically as the second one six years later, the first is by far the better remembered of the two. Those images of endless lines of cars waiting for their turns at the gas pumps are forever etched in the minds of those who witnessed the panic.

Maybe the first crisis is also remembered because it was the first time since the Second World War that America had been brought to its knees by a foreign power, and all over something as simple as a seven- percent reduction in shipments of imported oil. Also, the first energy crisis gave us both the Corporate Average Fuel Economy Laws and the fifty-five-mile-per-hour national speed limit. However, from a retail viewpoint Detroit was back to normal within eight months, only to be shut down again during the Nineteen seventy-five recession.

To make a point about how well we've both reacted to and forgotten the energy crisis, even the least fuel-efficient car today gets better gas mileage than a Nineteen seventy-four Olds Cutlass, which was rated at less than nine miles to the gallon. And by the way, the price of gasoline adjusted for personal income is cheaper today than the twenty-nine cents a gallon we paid in early seventy-three.

One not-so-bright spot: Many oil analysts believe that we should expect another oil crisis within the next decade. This time, they think, the crisis will be far longer lasting and wider in scope than any we've had before.

And I should also point out that today many people still debate whether or not the first energy crisis was real, or just the oil companies playing ———— (Insert closing song to the Michey Mouse Club.)

Story 19
Environmental Impact
of Automobiles
Tom Tyrell - Lute Riley Honda

The toughest debate ever about automobiles is whether they have improved the health of society or harmed it greatly. Newspapers today are full of stories about automobiles and how bad they have been for human health and the environment. But in fact, the automobile has possibly been the number one reason more and more Americans are living longer and longer.

Consider this: At the turn of the century the average life span of an American was somewhere in the neighborhood of fifty-seven years of age. Today it stands close to eighty. Many factors go into this equation, such as healthier lifestyles, less stress due to better and more widespread employment, certainly healthier eating habits, and quicker access to better medical care. Now consider this: Which one of those conditions would have come about without the automobile? Exactly: none.

Go back with us now to the summer of Nineteen hundred in New York City. The

temperature is hovering around one hundred degrees. Windows in overcrowded apartments are left open to catch any available fresh air. The only problem is that the air is anything but fresh - it stinks, and it's loaded with germs and diseases. That's because drivers on the streets of New York City, like the rest of the nation, moved by horse-drawn vehicles — almost a million of them - every day.

Think about it: Each horse leaves behind a couple of gallons of liquid waste on the streets daily and also twenty pounds of manure: meaning the main street in any city was the perfect breeding ground for disease. Street cleaners couldn't keep up with the twenty thousand tons of waste the horses in New York City produced each day. On any given day another twenty-five to thirty horses simply dropped dead; by some estimates, at times more than six hundred horse carcasses lay rotting on the streets.

It's no wonder that so many people died of serious lung diseases and infections - sickness carried aloft by insects, which multiplied in vast numbers from all the dead horses and the waste by products of the living ones.

Then came the automobile. In just a couple of decades horses disappeared from city life, and immediately the health of America started improving. However, by the late forties, Southern California was starting to complain about the amount of smog the automobile was producing and worried about its possible effects on our health. Of course, smog came from more than just automobiles, but cars took the brunt of the blame politically.

By the late sixties California decided it would start regulating automobile emissions. Congress then took up the battle cry and passed the Clean Air Act of Nineteen seventy. For the first time ever, automobile companies were forced to massively reduce the amount of exhaust emissions from automobiles.

It worked. Cars today are ninety-seven percent cleaner than they were just a quarter of a century ago.

But, while we should take pride in the First Clean Air Act of Nineteen seventy and what it has done for the nation, we should remember that even at their worst, automobile emissions were healthier and easier to deal with than those of millions of horses.

Story 18
The Beetle Comes to America

Drew Campbell
-New Car Dealers Assoc. Dallas

Volkswagen was in horrible shape after the Second World War. Half bombed out, the company had no raw materials; they were having to use machines stolen from French automakers in order to even build cars.

Within a few years, however, Volkswagen was back in decent enough shape that it was ready to expand its operations and areas of sales. Setting its sights on America, Volkswagen decided that the man who should bring Beetles to the U.S. was their Dutch distributor Ben Pon, a colorful and fearless individual. In 1949, Pon booked a passage on the M. S. Westerdam; with him he took his absolute belief in himself and a couple of Volkswagen Beetles in the cargo hold.

It was January 17th, 1949 when Pon and his Beetles arrived in New York. He had managed to arrange for a couple of newspaper reporters to meet him on the dock to cover the arrival of the Beetle. The reporters, however, were really interested in asking Pon only one question: Wasn't it true that the Volkswagen Beetle was really the brainchild of Adolph Hitler?

Not a great thing to read about your new product in the New York Times, especially with the war only just over. Ben Pon then checked into his hotel and began trying to make appointments with car dealers who might be interested in selling Volkswagens. Finally, after days of frustrating attempts, one Massachusetts Packard dealer told Pon he would look at the car, but not at his dealership - Pon would have to come to his home.

So Pon jumped into the Volkswagen and took off for Massachusetts in the snow to visit the man. When he arrived at this gentleman's home, the dealer refused to come to his door. Instead, he pulled back his drapes and peered out his front window at the Volkswagen - and then gestured for Pon to go away.

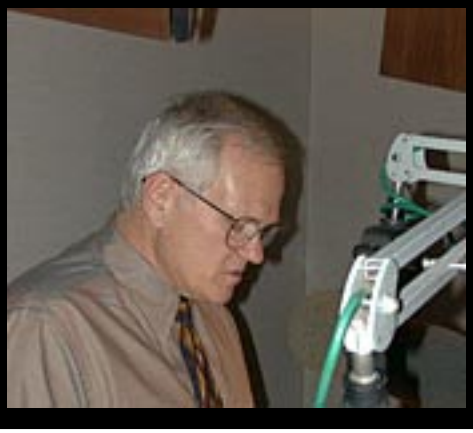
Back in New York, Ben Pon found he didn't have nearly enough money to pay his hotel bills, so he sold the two Beetles dirt cheap just to cover his expenses. Then he jumped on the first boat back to Holland.

Volkswagen then tried using car distributor Max Hoffman to launch VW here, and Hoffman had some success. Then, in January of 1954, VW finally took over sales of their vehicles themselves. You know what happened from there.

Forget about the story of the little engine that thought he could. Instead, it should be the little company that knew the Beetle could.

Story 17
Television Advertising

Byron Harris – Channel Eight



Television was in its infancy just after the Second World War. Now the few people who could afford to buy one of the new TV sets could easily find better things to spend their money on. It wasn't until Milton Berle's comedy show, in late 1948 on NBC, that television sales started to take off: sales of TV sets doubled in 1949.

Chevrolet had taken a chance on TV, advertising during the first broadcasts two years earlier. Nothing flashy - at best, Chevrolet can lay claim to having been the first auto company on television. For the next decade GM and Chevrolet ad campaigns played it safe. Dinah Shore sang "See the USA in Your Chevrolet." Pat Boone was hired on to reach younger audiences. But what Chevrolet did in the fall of 1957 changed television advertising forever.

Kensinger Jones was a young man working in advertising in 1957. Jones had been a television creative director; considering the quality of the ads at the time, "creative" may have been an overstatement. Jones' first job had been the live Pabst Blue Ribbon beer commercials, showing off their new pop-cap bottle. What's most memorable about those ads is that the cap rarely popped off when it was supposed to.

Another assignment was the Jolly Green Giant Company; they wanted more children asking for their products. Jones created a huge puppet of the Jolly Green Giant, believing that kids would fall in love with it and therefore want more vegetables - Jolly Green Giant vegetables. However, when the commercials aired on TV, the Giant looked more like Frankenstein and scared the hell out of young kids. Complaints flooded TV stations across America.

In spite of this start, Ken Jones was hired by Campbell Ewald to handle TV ads for Chevrolet. Jones wanted to do something different: ads that were mini-movies.
Now, at that same time in LA, cinematographer Gerry Schnitzer was making exactly that type of films: little clips of Americana. One showed a mailman on his route, stopping to play hopscotch when no one was looking. Another secretly photographed people in their cars at stop signs. Jones discovered Schnitzer's films and immediately knew how he wanted to sell Chevrolets to the public.

The collaboration between Jones and Schnitzer started with the 1958 Chevrolet. The scene was a family at home on prom night. The son is frantically rushing to get out the door. When he does, he heads for his old hot rod; but then, out of the corner of his eye he sees a new Chevrolet convertible in the driveway. Mom, Dad and Sis are standing on the front porch when the father smiles, reaches into his pocket, and tosses his son the keys to the new Chevy. Makes you want to smile, doesn't it?

That ad was long - its two-minute length was unheard-of at the time. Nevertheless, GM execs loved it so much they paid to have it shown on television in its entirety. Moreover, once that commercial ran, ad agencies across America started selling us the feeling that a product can give us, instead of its practical benefits. Advertising - and buyers' motivations - would never be the same.

Story 16
Safety Glass

Kidd Kraddick - KISS FM

If you were to be in an automobile accident today, what would you most fear happening? Aside from having your insurance canceled, you'd probably be afraid of getting thrown into the steering wheel or having the door crumple in on you. No one is very concerned these days about the car's glass shattering and the shards' cutting the occupants. But, for the first twenty years of automobile sales, that's exactly what cars' windshields did - far too often.

And it didn't take an accident for the glass to break, either. Sometimes just hitting the right pothole in the road twisted a car's body enough that an automobile's front windshield shattered into pieces, injuring the driver and passengers severely. Accident or not, you can imagine those large, sharp glass pieces posing a constant threat to the people in a vehicle.

Things looked like they were about to improve to some extent at the turn of the century with work being done on tempered glass. Nevertheless, automakers still knew that the most dangerous part of any automobile was its windows and windshields, so they worked nonstop to find a way to make glass that was transparent, but wouldn't shatter. By Nineteen oh-six laminated glass was shown to the auto companies as a way to stiffen a car's windshield - so that only the most serious accident would cause breakage. The only problem was that the process of lamination caused the windshields to dull after years of exposure to the sun's rays. Also, the new glass was thick and heavy, and it cost more than folks could afford. By Nineteen ten, though, the price had come down enough that laminated glass started appearing

on most new cars sold in America.

However, even this improved windshield didn't help in accidents where the driver or passengers were thrown into the material. Work continued on a better type of safety glass for the next sixteen years.

By the early twenties both the engineers at Ford and Delco's Charles Kettering had independently decided on the best approach: They would sandwich two pieces of glass on either side of a sticky gel-like material. The gel wouldn't turn yellow with years of sunlight, but was resilient enough to flex and not shatter in an accident. However, America's earliest versions of crash tests proved this solution a flop: Either the glass failed as if no sandwiching had been done to it, or the gel was too gummy. In that case, the crash-test dummy's head would go completely through the windshield - and be decapitated by the remaining glass.

Both GM and Ford take credit for originating the idea of using three thin plates of glass and two layers of gel to create the first version of modern safety glass for automobiles. This configuration was just the right mix: The windshield wouldn't shatter when hit, it was thin enough to see through clearly, and yet if a passenger's head hit it, it wouldn't go through.

Remember that we said both companies claim credit for that invention? Here's what we do know: Ford was the first company to use this TriPlex safety glass in its vehicles - on the Model A in Nineteen twenty-seven. From that day on, glass was no longer a major automotive safety flaw threatening travelers' lives. In this case, Ford really did have a better idea.

Story 15
The Suburbs

Kevin McCarthy - 570 KLIF

It has is said that all wars are economic in nature. Assuming that to be the truth, then the economic winner of the Second World War was America.

If you go back today and look at the Norman Rockwell painting of the returning GI after the war, you'll see a large family welcoming him home to their small apartment, complete with their wash drying on a clothesline attached to the small back patio. Yet within a decade those GIs and their families would be living in the suburbs.

Of course the suburbs as it were had been growing in this country since right before

the First World War. At the time, though, they were more controlled and still not far from the downtown region of any city. Suburbs typically were built along the tracks of a city's mass transit system. By the late twenties, cities like LA were certainly more suburbs than downtown area.

However, when the Great Depression rolled around, suburban growth virtually stopped. By the start of the Second World War, most Americans still lived in cramped quarters.

The real story of the American suburb starts with Bill Levitt, a military contractor who took his ideas from the war and changed the American landscape forever. Levitt had been commissioned by our government to design and build military housing during the war. Those buildings had to be inexpensive - and they had to go up quickly. So Levitt came up with the idea of pre-assembled buildings for the military. That way his factories could turn out the needed parts for a building in record numbers, and still make money doing it.

After the war Levitt saw that America's returning GIs and their new wives needed homes. Good timing too, because the baby boom generation was just being conceived. In 1947 Levitt bought an old potato field on Long Island and carved it up into two thousand house lots. There he built small four-room, seven-hundred-eighty-square-foot Cape Cod homes using his pre-assembled building technique. When those homes went on the market later that year, all two thousand homes sold within days.

By the early fifties there were seventeen thousand residents of Levittown, as it was then known. America took to the suburbs. Not only did Levitt build other cities across the East Coast, but his concept for home construction was used across America. For those who have lived in Dallas for some time, Fox and Jacobs homes were built using Levitt's ideas.

In addition, Bill Levitt did one other thing for us. He was the one who started using names like Mistletoe, Meadow, Shelter, and the like for streets. Moreover, all of his streets were called Roads, Lanes, Circles and Terraces. Today we take not only how our streets are named for granted, but also how the suburbs came about.

Without the Second World War and Bill Levitt's designs for building homes quickly and inexpensively, though, we might all still be living in grandma's small apartment.

And, of course without the automobile, the suburbs never could have happened.

Story 14
The Autobahn

Russ Martin
-97.1 the Eagle

The German Autobahn and its impact on society is full of modern myths. First off, the Autobahn was not the world's first superhighway; that distinction goes to the Autostrade, Italy's superhighway. Nor was it the world's first divided highway - that record belongs to the Bronx River Parkway. Nor was the Autobahn the brainchild of Adolph Hitler.

To be fair, Hitler loved automobiles, although he never learned to drive one. Hitler bought his first car, a Mercedes, in Nineteen twenty-three before the famous Beer Hall Pustz, the insurrection that landed him in Landsberg Prison. His car salesman was a gentleman named Jacob Werlin. During his stay in prison Hitler immersed himself in books, and one of them was Henry Ford's autobiography, "My Life and Work." Hitler realized what Ford had done for the American economy, and believed that if his countrymen could replicate Ford's efforts, Germany could rebuild itself from the rubble of the First World War.

Hitler then wrote his own book, "Mein Kampf," mentioning Ford in it. Once released from prison Hitler hired his car salesman, Jacob Werlin, to act as his transportation advisor. In the late twenties an obscure engineer, Fritz Todt, had been campaigning across Germany for the government to build divided superhighways, but without much success. It was when Hitler came to power, and based on Werlin's advice, that Todt was put in charge of the Autobahn project and given full funding.

Another myth is that the Autobahn was built for the military: It wasn't. Hitler believed that it would improve Germany's economy tremendously - which, in fact, it did. Originally the Autobahn was to stretch nine thousand miles. However, only nineteen hundred miles were completed by the start of the Second World War. The period from 1939 to 1942 saw another two hundred miles finished.

It should be noted that not one of the highways followed the German war front in either direction. In fact, after the war, Eisenhower admitted that he couldn't believe the German military hadn't taken advantage of its superhighway system.

Even so, when the media came to write about our own plans for an Interstate Highway System, they often cited the German military's successful wartime use of the Autobahn as the reason we also needed a system of superhighways.

Perception becomes reality. So the Autobahn and its myths are still the reason that we have an Interstate Highway System today.

Story 13
Unions

B. J. Thomas

Ask how the average person feels today about unions and you may get an earful of righteous indignation: "Union people have jobs but don't have to work; America's laborers are overpaid; high-priced union labor is a burden on the country." But it's mostly people making a better-than-average wage themselves who say these things. Poor people still like unions.

Collective bargaining had been around since the late eighteen hundreds, and industry hated unions then just as much then as they do today. Why? At first unions simply tried to get their members subsistence wages; they also fought for better and safer working conditions. All that costs industry money, and money to workers they weren't crazy about.

Back when Henry Ford started paying workers five whole dollars a day in Nineteen fourteen, other industries were forced to follow suit. Laborers finally became consumers — for about fifteen years, until the Great Depression hit. Having tasted the good life, those laborers didn't want to give it up just because a Depression was going on. And Detroit thought they should do just that, "for the good of the country." Corporate America as it were.

See, when the Great Depression hit, workers split into two camps: Going Communist or unionizing. Naturally, neither idea was popular in America's boardrooms, so this was war — economic war. On one side, corporate America screamed that the Depression would force mass bankruptcies if they couldn't cut wages. On the other side, the workers, whose incomes had been slashed until they couldn't pay their mortgages, were now being forced to speed up assembly lines to a dangerous, killing pace.

This war saw many battles and much bloodshed; some union sympathizers in Detroit even died for the cause. Finally, Franklin Roosevelt put an end to America's economic war. He signed the Wagner Act into law on July fifth, Nineteen thirty-five; and this Federal law gave workers the right to unionize. What changed the government's position from pro-corporate to pro-worker? Just the facts.

You see, unemployment figures hadn't gone down as corporations had promised they would, even though wages were still at only sixty percent of Nineteen twenty-six levels. Yet corporate dividends had shot up a hundred and fifty percent over the previous year. So, government quit letting companies plead poverty as an excuse for keeping their workers in deplorable, dangerous conditions. Roosevelt passed the Wagner Act, and it worked: Detroit's unions became the model for labor everywhere. America's middle class was reestablished.

Now, even if you've never joined a union, they have helped you. Most workers now have safe work environments, overtime wages, compensation if they're hurt on the job, even healthy retirement plans— but only because unions fought for and won those rights for their members first. Companies that didn't want unions — had to match union members' benefits or else.

Amazingly, many people today would never join a union because they already get benefits. They just don't realize that it was the unions of Detroit that led the way for those benefits in the last half of this century.

Story 12
Creation of the Ford Motor Company

Bo & Jim - 92.5 FM

Henry Ford apparently liked starting car companies. Why else would he have formed three of them within three years?

Numerous people had offered to back Ford since his first car, the Quadracycle, hit the streets of Detroit. The gentleman most interested in Ford's invention was William Maybury. Now Maybury had befriended Ford's father decades earlier and in the interim he had grown wealthy with the real estate boom that had happened in Michigan at the end of the nineteenth century. So Maybury got a group of investors together and on August fifth, eighteen ninety-nine, announced the formation of the Detroit Automobile Company. It was also the first car manufacturer actually located in Detroit.

On January twelfth, Nineteen hundred, Ford introduced the company's first vehicle; but it wasn't Ford's marvelous car, it was a delivery wagon. For whatever reason, Ford refused to give up the designs for his car - though that vehicle was the reason investors had signed on. The delivery wagon didn't sell in enough numbers to do much more than lose money, eleven months after it opened, the Detroit Automobile Company closed shop. The investors had lost close to ninety thousand dollars because

of Ford.

Ford spent his last months with that firm working on a new racecar. And on October tenth, Nineteen oh-one, Ford raced his car against the legendary Alexander Winton and beat him badly. That brought another group of investors wanting to start a car company with him, again led by William Maybury.

So, a little over a month later, the Henry Ford Company was incorporated, but it went the same way as his first firm. Instead of working on building automobiles, Ford instead worked on still another racecar. This time, however, his investors weren't going to wait for another year to go by with non-stop losses. Ford was thrown out of his second car company in March of Nineteen oh-two. His settlement was a measly nine hundred dollars.

The very next day the Henry Ford Company was renamed Cadillac.

Ford went back to work on his racecar full time. This vehicle would be the famous Nine Ninety-nine, raced by Barney Oldfield. However, although Ford had burned every major investor in Detroit, one man still believed in him: Alex Malcomson, Detroit's biggest coal dealer. Malcomson offered to back Ford in yet another car company. Malcomson asked his uncle, John Gray, a local banker, to lend him the money for the venture. Gray approved the loan, but only on the condition that he and not Malcomson be president of the new company. Gray also insisted that Malcomson's head accountant, James Couzens, be in charge of the money.

So on August sixteenth, Nineteen oh-two, a new car company, incorporated: Malcomson and Ford. Three months later, Ford, Oldfield and the old Nine Ninety-Nine racer won the Grosse Point race. That very day Ford told his partner and backer that from that day on the company would be known as the Ford Motor Company.

Malcomson would end up on the losing side of his battles with Ford. However, if it hadn't been for him, Ford would never have made it. Because it was the steady hands of Malcomson's uncle, John Gray, and his accountant, James Couzens, that kept Ford's genius on track. And without the Ford Motor Company ever losing any money.

Today we expect the latest, greatest invention to come out of the largest corporate research laboratories in the world - if for no other reason, because it takes so much research capital to actually invent something. Assuming the government will actually let the product be sold.

However, because the automobile was created over a hundred years ago, it wasn't designed by a large corporate entity, but instead by one of the poorest people in Germany, Carl Benz.

It was 1878 and Carl Benz owned a small machinery shop, never making much money. In fact, things were so bad that his creditors were constantly suing him for non-payment on his bills. Benz was forced to take odd jobs just to keep food on the family table.

Now Benz was a very clever inventor. He'd designed a brilliant tobacco baler, but nobody bought it. So Benz decided to build gasoline-powered engines, only because of his financial circumstances he couldn't afford to buy anyone's patent for the engine. He tried designing his own, but they didn't work.

It was New Year's Eve of 1879 when his wife Berta, seeing how distraught her husband was, suggested that the two of them go down to his shop and work on the engine one more time. That night, as the Mannheim church bells brought in the New Year, Carl Benz's engine came to life - midwifed by Berta.

Three more years would elapse before a local bank would lend him the money to put his gasoline engine into production. However, by this point Carl Benz had decided the perfect use for a gas engine was to mate it to a carriage and thereby create an automobile. He informed his bank's board of directors of his decision to move on building an automobile - they refused him the right to do it. In fact, they actually thought Benz was insane and talked about having him committed.

For the next four years Carl Benz was again forced to work on his own with little if any money. Then on January 29th, 1886, a bitterly cold night, Carl Benz jumped into his automobile and drove around Mannheim Germany. He forced his son Eugene to run alongside with extra gasoline. And we should point out, the car broke down.

Night after night, Benz and his son would have to push his invention back to their home. However, the trips kept getting longer and longer. Finally, on July 2nd, 1886, Benz managed to drive his car completely around Mannheim without a breakdown. Still, Benz wasn't really ready to start selling his car.

For the next two years he worked on his vehicle. Then early one morning in August 1888, disgusted with her husband's procrastination about selling his car, Berta Benz piled her three sons into her husband's car and drove it to her parents' home in Pforzheim forty-five miles away. She returned two days later with the pronouncement that the vehicle was now ready to sell. No word on whether there was a fight in the Benz home that night.

It took the perseverance and genius of Carl Benz to invent the automobile, but if his wife Berta hadn't stolen it, Benz never would have gotten it to market.
And in case you didn't catch it, yes, it was a woman who took the first long distance drive ever in an automobile.

Story 10
Interstate Highway Act
Julia Somers – Fox Four News

In Nineteen nineteen the Army decided to make a point about the sad state of travel in America. On July seventh of that year, at eleven-fifteen in the morning, a three-mile long caravan of trucks and tanks took off from just south of the White House for Union Square in San Francisco, a journey of three thousand miles. Sixty-two days later, the army convoy finally managed to pull into San Francisco. We should point out that pioneers of forty years earlier had crossed America in Conestoga wagons in not much more time than that.

Among the officers on the Army's trip was a young Lt. Dwight Eisenhower, who wrote in his diary of the trip that "This was an adventure through darkest America with tank and truck." Eisenhower then added, "We need better roads."

Two years later, in Nineteen twenty-one, America passed the first National Highway Act. Its provisions were that roads were to be built that would connect every county seat in America.

For twenty years, however, Eisenhower kept thinking that our nation needed superhighways. Then, during the Second World War, he was amazed that Germany hadn't used their Autobahns for military purposes, relying instead on their rail system. After all, concrete roads were much harder to destroy than train rails and easier to put back in action. Yet, contrary to popular belief, not one of the German Autobahns ran in the direction of any of Germany's war fronts.

Once Eisenhower was elected President he started reviving his ideas for an interstate highway system. Moreover, his personal vision was that it would greatly improve commerce - and therefore lead America to greater prosperity. It was a tough sale in Congress; they were more worried about the Cold War, and believed the economy was doing well enough as it was. So, Eisenhower and his staff took a different spin on why the nation needed the Interstates - a military reason, as it were.

One scenario they gave Congress was that, in the case of a nuclear war, an Interstate

system would still allow us to move our troops. The most far fetched of their reasons was that in the case of all out nuclear war our bombers could return, land on the Interstates, refuel, reload and take off again for Russia. That did the trick. In Nineteen fifty-six, President Eisenhower signed the second Interstate Highway Act, and our modern freeway system was created.

Finally, an item you may not know about our Interstates. In Nineteen sixty-three, when the program was severely behind schedule, Robert Austin, an engineer, came up with the idea of using nuclear weapons to remove some of the peskier mountain ranges in California standing in the way of Interstate 40.

The explosion was to take place in the Bristol Mountains, between Barstow and Needles, California. The idea was to place twenty-two hydrogen bombs under the mountains and vaporize them. Even the Atomic Energy Commission was excited about the idea of using Atoms for Peace, and they signed off on the weapons' use. California officials, on the other hand, didn't think building radioactive highways was such a great idea, and they stopped the use of nuclear weapons for construction.

Of course, if they had used them, streetlights wouldn't be needed at night.

Story 9
Automatic Transmissions

Pat Summerall

The automatic transmission. Because of its invention, who wants to go back to shifting? Well, believe it or not for decades after the automatic came out, most people still wanted a clutch pedal next to the brake.

Of course automatic transmissions have always been around, or at least some variation of them. Let's face it, the original Model T had a planetary gear setup in it that only required putting your foot on the gas pedal, although it only gave you two forward gears, another pedal for reverse and the third pedal for braking. The original Model T didn't require shifting.

Andre Citroen gave Europe an automatic transmission with his revolutionary Traction Avant front-wheel-drive car of Nineteen thirty-four. Still the great debate goes on as to when the first of the modern fully automatic transmissions came into being. That honor goes to the Nineteen forty Oldsmobile Hydra-matic. As with most new inventions, the public didn't buy them it in any real numbers.

Now the first automatic transmission that used a torque converter to shift its gears was introduced in the Nineteen forty-eight Buick Roadmaster. That transmission is really the one of which all modern automatics are variations. That particular unit was called the Buick Dyna-flow. Of course, as all the old-timers who remember that one know, its owners more often referred to it as the Dyna-slip.

Automatic transmissions were perfected over the next decade. It still surprises most people to realize that as recently as the late sixties you could still buy a full-sized Chevrolet Caprice with a three-on-the-column manual shift — Chevy actually sold a lot of them.

During the seventies and its two energy crises there was a run back to manual transmissions, based on the public's perception that they gave you far superior gas mileage. While that might have been true in the fifties and early sixties, due to the inherent slippage of automatic transmissions, it certainly wasn't the case by the mid-seventies. Manual transmissions were more fuel-efficient, but only if you shifted gears at the exact right engine rpm - which no one ever did.

Of course now computers control automatic transmissions, which means that every last one of them is more fuel-efficient than a manual transmission in the hands of the average driver.

It took almost a half-century of engineering to take us from Henry Ford's Model T planetary-gear system to a modern automatic transmission. Then it only took another decade for most Americans to want to give up shifting.

Story 8
Five Day Work Week

Charley Pride – Legend

A two-day weekend. Today most of us enjoy that luxury, although some people believe not even two days off is enough.

However, life wasn't always so good here in America. Before 1926, people worked six days a week - and mostly 10 hours each day. Sixty hours was the standard work week; Sundays in church and then back to the grind early Monday morning.

To be fair, President Warren Harding asked Congress in 1921 to pass a law reducing the amount of hours Americans had to work. But, as with so many other pro-worker

ideas, lobbyists for American corporations flooded their Congressional leaders' offices with protests: If the number of hours workers were required to work were reduced, they said, it would mean financial ruin for their companies. No such bill ever made it out of Congress.

Now - enter Henry Ford.

By 1926 the Model T just wasn't selling anymore — at least, not profitably. General Motors and the then upstart Chrysler Corporation were coming up with more modern automobile designs. Moreover, with the public's spending power improving, consumers no longer felt the Model T was necessarily the best buy on the market. Even cutting the price no longer helped sell it; it had started out as a seven-hundred-ninety-five-dollar car, but sixteen years later the Model T was selling for only two hundred ninety-five dollars for the base model. Henry Ford needed to cut costs and do it quickly.

The powers that ran Ford believed that the company could once again be profitable if they cut wages by fifteen percent. However, Ford knew he'd take a heavy hit in the press if he took money from his workers with no other reason than to cut expenses. So instead, they came up with a great PR campaign that would benefit both parties: The Ford Motor Company would start closing its factories on Saturdays. When it came time to tell the press why, Ford explained that it was because he felt his workers needed more time to spend with their families. They should enjoy life more. Ford even told the reporters that a five-day work week wouldn't cost his company any profits whatsoever. The workers got Saturday off and Ford saved his 15% in labor costs.

Newspapers across America printed the story that Henry Ford, the humanitarian, felt that workers shouldn't have to work more than five days a week, and that's why his company would lead the way by closing on Saturdays.
Now, if they didn't want to look heartless, every other company in America was forced to follow Ford's example. That's the reason you have two days off every weekend to enjoy life. All thanks to the fact that Model T sales bottomed out in 1926.

Story 7
Ralph Nader

Clarice Tinsley – Fox Four News

Was Ralph Nader's "Unsafe At Any Speed" the book that changed America's concept of what automobile safety should be? Maybe. The biggest obstacle to meaningful

safety laws was the fact that the public just didn't care about the subject at all — although by the time Nader's book came out in 1965, more than one and a half million Americans had died in automobile accidents.

By Nineteen sixty-five many people had written articles on automobile safety, or on its apparent absence. One such person, James Ridgeway, who had written a scathing article on the Chevrolet Corvair in Nineteen sixty-four for New Republic magazine.

That article caught the attention of New York publisher Richard Grossman, who was willing to put up the money for a complete book on the problems with automobile safety. He approached Ridgeway about writing the book, but Ridgeway was now too busy to accept the assignment. Instead, he suggested that Grossman hire the man who had provided so much of the information for his New Republic article. That man was Ralph Nader.

Nader was an attorney by trade, having graduated from Princeton. His dedication to making Congress and the public aware of the fact that cars could be safer was based on an accident he had witnessed while hitchhiking as a college student. One night Nader had come across an accident, one in which a little girl had been beheaded — by the glove box, which the collision had sprung open. Nader was appalled that for lack of a decent glove box latch, this little girl had lost her life.

So he agreed to write "Unsafe at Any Speed" - on which the public turned its back in record numbers.

The book did have one effect. General Motors decided to investigate Nader for having criticized their Corvair. Shortly thereafter, the Congressional Police caught GM in the act of tailing a Ralph Nader lookalike, GM's president James Roche was forced to apologize to both Congress and Nader for the unwarranted investigation. It is said that Ralph Nader walked into Congress that day a nobody, and walked out with a constituency.

That's when the media picked up the story and ran with it. Of course, once it became front-page news, the public turned "Unsafe At Any Speed" into a best-seller. Those two events got our first automobile safety laws on the books.

Still, for decades few people demaded safer automobiles, although by law their critical engineering was improving yearly.

No, the modern mantra of "I want a safe car" started with Lee Iacocca's putting air bags into his Nineteen eighty-eight line of Chrysler cars. -Iacocca had only put them in because Chrysler didn't have any new models that year. However, it worked. Automobile safety was finally being sold on TV, and the public signed on.

However, it was really Ralph Nader, twenty-three years earlier, who first brought it to our attention that we could all be driving safer cars. Moreover, as a man of conviction, he wouldn't stop his crusade for safer automobiles until the public finally caught on to what he was telling us——all the way back in nineteen sixty four.

Story 6
Automobile Racing

Norm Hitzges

Today automobile racing, whether it be Indy cars or NASCAR style vehicles, is one of America's most popular spectator sports. However, automobile racing is actually the forerunner to modern car dealerships - because that's exactly what the sport was first designed for, to sell the public on automobiles. The logic was that whatever car won the latest publicized race must be the best built of the vehicles being driven. And therefore, that must be the best car to purchase.

Car manufacturers got into the habit of paying to get their cars in any race they could enter in order to watch their cash registers ring if their vehicle happened to come in first.

Racing his designs certainly put Henry Ford on the map. Or perhaps we should say his vehicles were so impressive that investment group after investment group continued to fund his start-up automotive firms. However, even to this day folks in America remember the Old 999 and its driver, Barney Oldfield. What almost no one remembers is that Henry Ford designed that racecar.

Alexander Winton, a Cleveland car manufacturer whose reputation was solely built on his early racing activities, was the one who created automobile racing as a sales campaign. In fact, Winton won enough races early on that his firm was one of the few successful automobile companies before the turn of the century. His downfall came when he kept losing races to Ford.

Buick was also famous for its racing teams just after the turn of the century. Moreover, Buick's best driver was Louis Chevrolet, who would later start his own car company — and then walk away from it to return to the racetrack. In the interim, the Buick team won so many races before Nineteen-ten that the public turned out in droves to buy Buicks, thereby saving the company from bankruptcy.

By the start of this century's second decade, car dealerships were starting to develop in large numbers. Additionally, Ford had captivated the public's imagination with his Model T in Nineteen-oh-eight. Here was a car that the public could reasonably afford to buy, and it certainly was one of the most durable on the roads - on what passed for roads at the time, that is.

Yet, although the public would flock to the Model T in ever-increasing numbers, no one seriously thought that the Tin Lizzie could win any automobile races. So racing came into its second incarnation: that of a testing ground for automobile manufacturers.

It was in this second phase that tracks like the Indianapolis 500 were built. Now car companies tested engines, brakes and chassis on racetracks. Even today, car companies from Honda to Mercedes-Benz use racing as secondary test facilities.

So, before there were car dealers, there were automobile races to sell the public on one company's line of cars. And today the public still loves watching cars race. Maybe that's because they don't realize that these racers were once the car salesmen of America.

Story 5
Air Conditioning

Rene Isip – Lute Riley Honda

Only in Texas would the invention of air conditioning in automobiles rank so near the top of our list today.

Ways to air condition buildings had been developing in America since the late 1880s, although most systems did little more than throw a breeze and some water based humidity into offices. However, by the early thirties more and more public places were using the fact that they had air conditioning as a primary reason for doing business with them. Yet, American's carmakers didn't seriously consider air conditioning in automobiles for the first fifty years that cars were made.

The reason A/C wasn't a priority is simple: For any air conditioning unit to be able to function properly, the space it cools has to be completely enclosed - and in the early days most automobiles were at least semi-open, and all of them were drafty.

Work began on air conditioner units for cars, somewhere around 1930. The obvious forerunner in the project should have been General Motors - if only because they had perfected the modern refrigerator and understood the mechanics of compressors, cooling coils and the like.

Still, at the start of the thirties the automobile air conditioners were nothing more than units that hung on a side window. Filled with either water or ice, they depended

on the evaporative effect of a car's forward motion to cool down its interior. Although they weren't very effective, these hang-on type units could still be purchased in the late sixties.

Instead, the pioneering work on automobile air conditioners used items like water and alcohol mixtures, liquid nitrogen, and a gasoline vaporization unit that managed to go through 26 gallons of gas an hour. Not so practical.

Finally, at the Chicago Auto Show in 1939, Packard introduced the first factory installed air conditioner for an automobile, on one of their 1940 models. Believe it or not, the Packard's air conditioning unit really didn't catch on.

The early fifties in Dallas, however, saw Orand Buick, now Ewing, and other local dealers' service departments building custom A/C units for their clients - using parts that typically came from old refrigerators. At a time when you could buy a Buick for twenty-four hundred dollars, for those who wanted the handmade air-conditioning units they paid another eight hundred dollars.

When GM offered factory auto A/C units in the late fifties, they still accounted for fifteen percent of a new car's total price. So, although summers were just as hot then as they are today, not many air conditioning units were sold as factory equipment.

Even as late as 1968, less than half of all new cars sold in America had refrigerated air. That's right. We were about to put a man on the moon, but were burning up in our cars on earth.

However, as the Baby Boomers came of age, they demanded comfort in both cars and homes. Along with better stereo systems, the Boomers finally put automotive air conditioning on the map for good in the late seventies.

Story 4
The Corvette

Ron Chapman - KVIL FM

From the mid-Nineteen-twenties to Nineteen fifty-nine, one man and one man alone was responsible for styling most of our country's automobiles. His name was Harley Earl; and his automobile designs were so powerful that once an Earl-designed GM car came out, other car companies scrambled to match the competition from the General. While today we mostly remember Earl's tail-finned behemoths from the fifties, it should be remembered that Earl also left us with one enduring legacy: The

Corvette.

Harley Earl had grown up in Southern California, the next-door neighbor of director Cecil B. DeMille. As a young man he designed and built custom car bodies for movie stars. It was that kind of unique design work that came to the attention of General Motors, which hired Earl in Nineteen twenty-six. His first car for General Motors was the stunning Nineteen twenty-seven Cadillac LaSalle. By the end of the Second World War Harley Earl was busy designing what would become the classic cars of the fifties.

However, Earl also managed to catch an automotive trend that everyone else in the industry dismissed as a passing fancy. Across America servicemen who had been stationed in England and Europe were bringing back Jaguars and MGs when they came home after the war. And not only were these GIs driving their British sports coupes during the week on business, but they were having fun in road rallies and races on the weekend.

Earl realized that America had never built a car to compete with these European coupes. So he talked his bosses at General Motors into allowing him to design a sports car for the Nineteen fifty-three Motorama, due to take place in New York. GM agreed, but insisted that Earl shave the costs by using already existing parts for the vehicle's undercarriage.

Earl had already done one show car that could be considered a type of sports coupe, the Nineteen fifty-one LeSabre. However, the car's critics said it was far too large to really belong in the sports car category. This time, Earl and his staff decided, they would design a car that could compete head-to-head with the European sportsters - or at least looked like it could.

January Nineteen fifty-three, the world got its first look at the Corvette when the Motorama opened at the Waldorf-Astoria Hotel in New York. Thousands of people lined up to just stand and look at Earl's creation for hours. Potential customers offered to put up deposits on the spot if General Motors would build one for them. In fact, GM felt the demand for this new car was so great that the Corvette got the green light for production immediately.

On June thirtieth, Nineteen fifty-three, the first Corvette ever was produced. It wasn't actually much of a sports car: It had a one-hundred-fifty-horsepower, six-cylinder engine mated to a two-speed automatic transmission. Base price? Three thousand, four hundred ninety-eight dollars. Three hundred Corvettes were built that year. The next year thirty-six hundred 'Vettes were built, but the market only bought half of them during the model year. Then in Nineteen fifty-five Ford brought out the fabulous Thunderbird, and it looked like it was almost over for the poorly selling 'Vette.

One of the people who first saw the Corvette at the Waldorf Motorama was a Fairchild engineer by the name of Zora Arkus Duntov. He wrote Ed Cole, head of Chevrolet, a letter that was quite critical of the original Vette. Cole, impressed with Duntov's

points to correct on the car, hired Duntov as a research engineer for the Corvette. It was Duntov who turned Earl's great designs into a world-class sports car - a legend that still lives today.

Story 3
$5 Dollar Day

Dale Hansen - Channel Eight

The modern American middle class was born as a byproduct of the Ford Motor Company's effort to cut down its suicidal turnover rate. However, the advent of the five-dollar workday for common laborers also shook corporate America to its financial bones - and forever changed the lifestyle of the average citizen.

Henry Ford had never been overly generous to his workforce, although Ford was nowhere near as miserly as other large corporations. When the Model T was introduced in Nineteen oh-eight the average worker at Ford made a dollar ninety for a ten-hour day — or just under six hundred dollars a year. That was about twice what the average American family made at the time. Still, it wasn't enough to truly get ahead in the world.

By Nineteen thirteen, as the Model T started hitting its stride and making a fortune in profits, the average worker at Ford was earning two dollars and fifty cents a day — the most skilled workers were making four dollars.

The moving assembly line along with its repetition, however, were burning out employees: Turnover at Ford was hitting four hundred percent every year. At that rate of turnover, Henry Ford realized, he would never be able to maximize volume for the Model T; and therefore, he would never get the price of the vehicle down far enough that every possible buyer in America could afford one.

Something had to done to stabilize Ford's work force, and in the summer of Nineteen thirteen John Lee, a new Ford employee from Keim Mills, was put in charge of figuring out how to stop the flow of disgruntled former workers. Lee came up with a plan to double the pay of the average worker while at the same time reducing the average workday from ten hours to only eight.

The plan was set up in which a worker got his regular two dollars and fifty cents a day, and then got a bonus at the end of the year that effectively doubled his earnings. Lee correctly deducted that instead of turning over at four hundred percent, everyone would stay for the entire year because they had so much invested in that bonus.

Also, the eight-hour day allowed Ford to run three shifts a day instead of two, meaning they could build more Model Ts. Ford got more production; the workers put in fewer hours and more than doubled their pay. A win-win deal. Only, not everyone at Ford was sure the plan would work. Among the skeptics was Henry Ford himself.

On January fifth, Nineteen fourteen, the Ford Motor Company board of directors debated the new pay plan. Henry Ford wasn't sure it was the answer to his labor problems; James Couzens, Ford's right-hand man, was sure. Ford finally threw his weight behind it, and the board of directors approved the new pay plan. They announced it to the press hours later.

Corporate America screamed. Editorials appeared in business publications slamming Ford, claiming his suicidal wage structure would destroy the economy. However, the Ford plan worked as advertised. Production went up; the workers became consumers and bought homes and other material goods with their newfound wealth. Other industries were forced to follow Ford's plan.

The fact is, the middle class in America had its start in Dearborn, Michigan, on January fifth, Nineteen fourteen. All thanks to Ford.

Story 2
Consumer Credit

John Tippets – President
American Airlines Credit Union

Today you own your own mortgaged home, finance major purchases and even get unsolicited credit-card offers in the mail. But none of this would ever have happened without the creation of the automobile - and the installment credit plan with which to buy them.

Offering installment plans to the public came out of French automakers' desperation. That's right, consumer credit is a French invention.

At the turn of the century, business had a number of givens. One, the center of the world's automobile industry was Paris. Two, individuals couldn't be trusted to repay loans borrowed from commercial banks - unless they were for farm property with a proven track record. And quite often even those went into default.

In fact, America's government gave the railroads free land to build their tracks; in

turn, they ferried immigrants for free to the parcels of farm property picked out by the newcomers, who in turn paid the railroads for their farms. Banks wouldn't enter into land financing for individuals until the second generation of farmers.

However, around the turn of the century the French auto industry fell into a recession compounded by the fact that it had overbuilt production facilities. Horrifyingly, the French auto industry looked like it could fail totally.

So, in 1906, the French government helped create the Banque Automobile, which decided it would take a chance on loaning individuals the money to buy cars - and therefore save the French auto industry. It worked.

What was remarkable, the French found, was that the individuals who financed their cars were great about repayment — and paid higher margins than corporate loans. Soon the idea of lending money to individuals for major purchases spread around the world: The Morris Plan Banks lent money for cars starting in 1910. Studebaker took notes directly from consumers in 1911. General Motors created GMAC in 1919 because they were building more cars than people could pay for in cash. Ford finally started Universal Credit, the forerunner to Ford Motor Credit, in 1928 to make sure the Model A found enough homes.

Suddenly there was a transformation in how lenders saw individuals. People bought cars on credit, then homes, then more cars, and lending became a very satisfactory and profitable industry - in spite of all the old-time bankers' forecasts that it would break the economy.

Look around your house at all the things you've bought on credit. You have them because the French auto industry almost failed and took a chance on lending ordinary people the money to buy cars. Thank God they paid them back on time; for the flow of money in the world changed forever.

Story 1
Moving Assembly Line

Troy Aikman - Dallas Cowboy

Henry Ford was supposed to be a farmer. His father even gave him a good-sized spread as a wedding present when he married his beloved Clara. The only problem was that Ford wanted nothing to do with working the soil for a living. So, he moved into Detroit to find his fame and fortune. You probably know the rest of his story

from there.

What you may not know is what really drove Ford as a man. In fact, his sympathies would always lie with the American farmer. When Henry Ford talked about his "car for the masses," he wasn't talking about city folk.

At the time Ford said that, eighty percent of all Americans still lived on single family farms; and at the turn of the century the average farm family's income was well under $300 a year. Building a car for the masses would mean the car would not only have to be rugged but be able to be built cheap - dirt cheap.

Ford's idea of mass production came with the introduction of the Model T in 1908. At the time Ford had outgrown his original factory on Piquette (Pea-kett) Street. For the new car Ford decided to buy sixty acres in Highland Park, just outside of Detroit, and build the world's largest automobile factory.

Ford told the press at the time of that announcement that, "The principle is to decide on your design, freeze it, and, from then on, spend all of your time, effort and money on making the machinery to produce it, concentrating so completely on production that as the volume goes up, it is certain to get cheaper per unit to produce."

To that end, Ford had experimented with the moving assembly line in 1908, albeit very crudely. Ford had his men assemble one Model T chassis and then attach a rope to it. The workmen then pulled that chassis through a small work area to see how much quicker it could be assembled if the car came to the workforce instead of the workers moving around it during construction. Ford continued the experiments.

Then in 1911 Ford found the book on how to manufacture items more efficiently, it was, "The Principles of Scientific Management," by Frederick Taylor. For the previous thirty years Taylor had made a career of time and motion studies, trying to find ways to make workers more productive by eliminating wasted motion. Ford's people latched onto that book and the principles of Taylorism - and integrated that study into the Highland Park factory. Ford, to his credit, also figured out a way to make machinery as Taylorized as the workers. Now uncompleted work moved logically into the proper workstation, where laborers did more logically laid out construction; and sure enough the plan was nearing perfection.

The proof? When the Model T was introduced in 1908 it cost nearly $900. At the end of its nineteen year run the base model was only $265.

Without Ford's creation of mass production our goods would never have come down to the price where the public at large could afford to buy them. Moreover, because the system was so efficient, workers could be paid more. Therefore, we could also afford to buy consumer items. All thanks to Henry Ford and his moving assembly line.

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